#### DEPARTMENT OF TRANSPORTATION

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January 19, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: Information Packet for TBPOC Meeting – January 19, 2006

Dear Committee Members:

We are pleased to provide you with a 'TBPOC Information Packet' for the upcoming January 19<sup>th</sup> TBPOC Meeting. The binder includes memorandums and reports that will be presented. A 'Table of Contents' is provided following the 'Agenda' to locate specific items. Items that are to be included after the mail-out will be printed on blue paper.

JON TAPPING, Acting SFOBB East Span Project Manager

# Toll Bridge Program Oversight Committee Meeting Materials

November 21, 2005















# **Toll Bridge Program Oversight Committee** Agenda

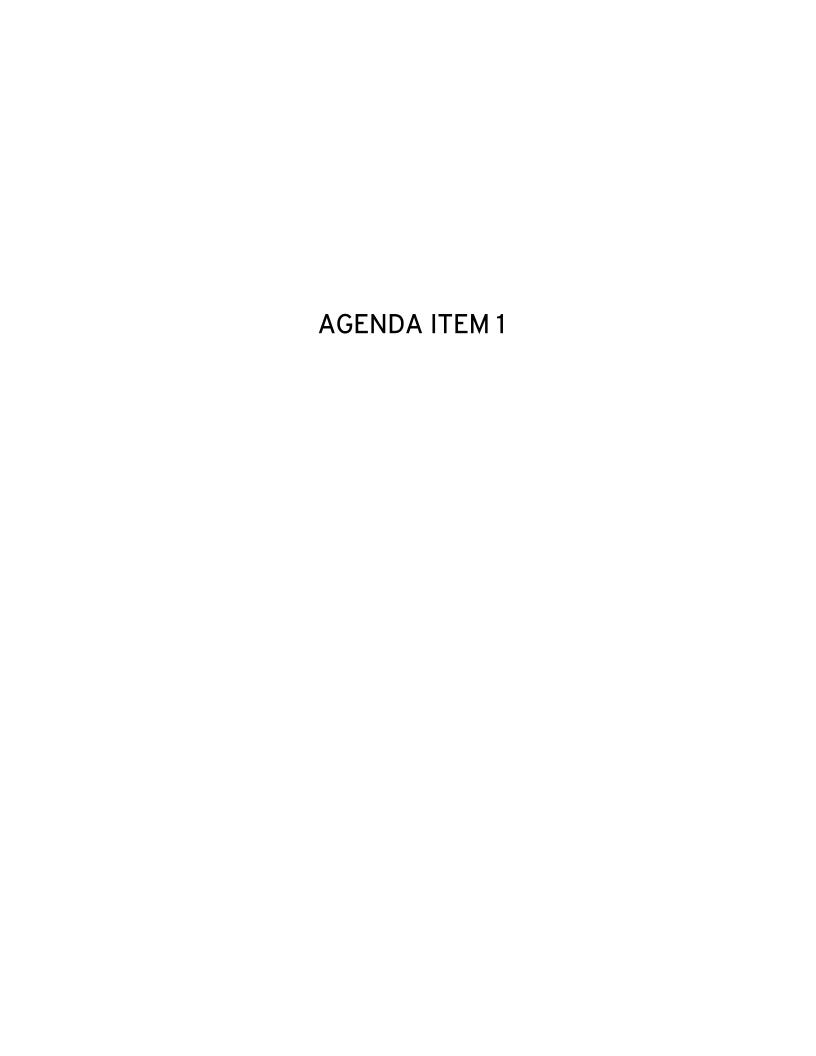
January 19, 2006 10:00 AM to 12:00 PM Pier 7 Oakland CA

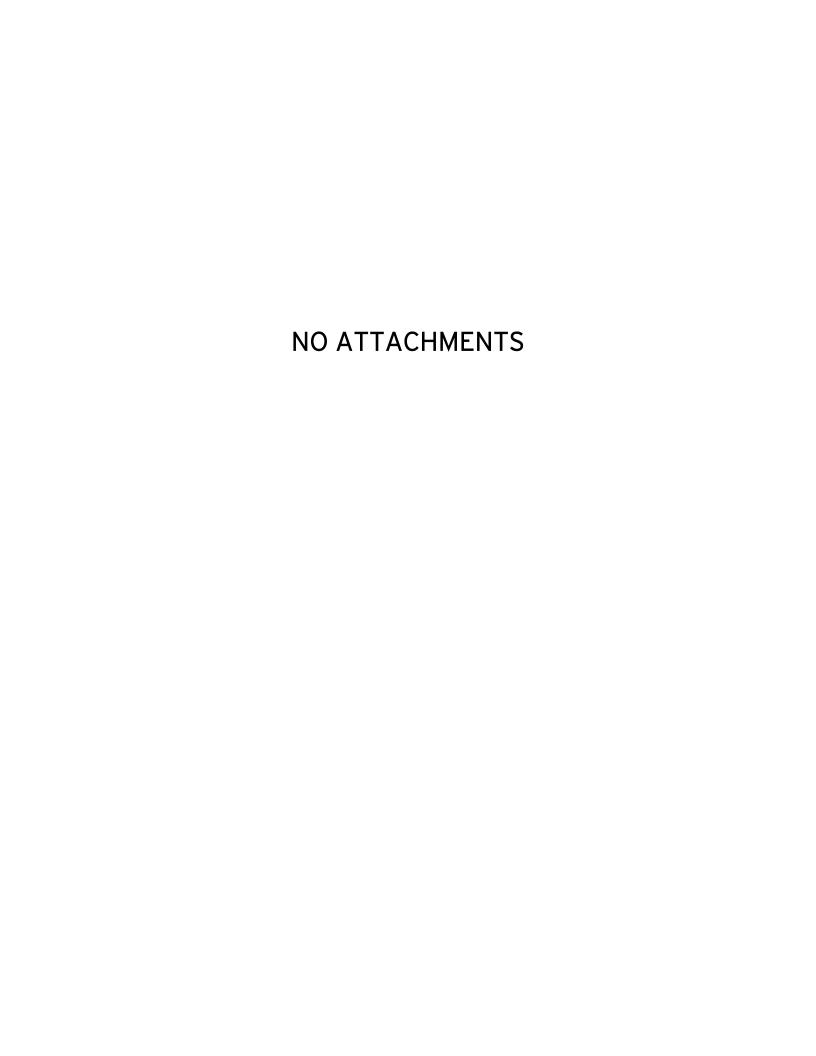
	Pier 7, Oakland, CA			
	Topic	Presenter	Time	Desired
				Outcome
1.	Chair's Report	W. Kempton, Caltrans	5 minutes	Information
2.	Consent Calendar	Culturis		
	a) December 12, 2005 Meeting Minutes*	A. Fremier, BATA	2 minutes	Approval
	b) December 14, 2005 Conference Call Minutes*			Approval
	c) December 22, 2005 Conference Call Minutes*			Approval
	d) December 29, 2005 Conference Call Minutes*			Approval
	e) January 04, 2006 Conference Call Minutes*			Approval
	f) January 11, 2006, (2:00 PM) Conference Call**			Approval
	g) January 11, 2006, (3:00 PM) Conference Call**			Approval
	h) January 11, 2006, (4:00 PM) Conference Call**			Approval
	i) 2006 TBPOC Calendar*			Approval
3.	Monthly Progress Report			
	January 2006 Progress Report (Draft)***	A. Fremier, BATA	2 minutes	Information
4.	4 <sup>th</sup> Quarter Report, Ending December 31, 2005 (Draft)***	A. Fremier, BATA	2 minutes	Information
5.	SFOBB East Span SAS Contract			
	a) Estimate Update*	J. Tapping, Caltrans	5 minutes	Information
	b) Outstanding Bidder Inquiries Update and Feedback*			Information
	c) SAS Communications*			Approval
		B. Ney, Caltrans	5 minutes	
6.	SFOBB East Span Skyway Contract	J. Tapping,		
	a) Hinge Pipe Beam DRB Update*	Caltrans	1 minute	Information
7.	West Approach Project	J. Tapping / K.	5 minutes	Information
	a) Risk Management Review*	Terpstra, Caltrans		
8.	New Benicia-Martinez Bridge Contract	M. Forner	5 minutes	
	a) CCO 71*			Approval
	b) CCO 99*			Approval
9.	Antioch and Dumbarton Study	M. Pazooki	5 minutes	
	a) Study Update*			Approval
10.	TBPOC Meeting Preparation Policy and Procedures	R, Iwasaki,	3 minutes	
	a) Meeting Attendance and Materials*	Caltrans		Information
11.	Status of Caltrans Toll Program Manager and East Span	W. Kempton,	2 minutes	Information
	Project Manager Hiring*	Caltrans		
12.	Other Business	R. Iwasaki/	5 minutes	Approval
	a) BATA/Caltrans Co-Op Agreement*	A. Fremier		
13.	Next Meeting: February 23, 2006, 1:00 PM, Sacramento			
		•		i e e e e e e e e e e e e e e e e e e e

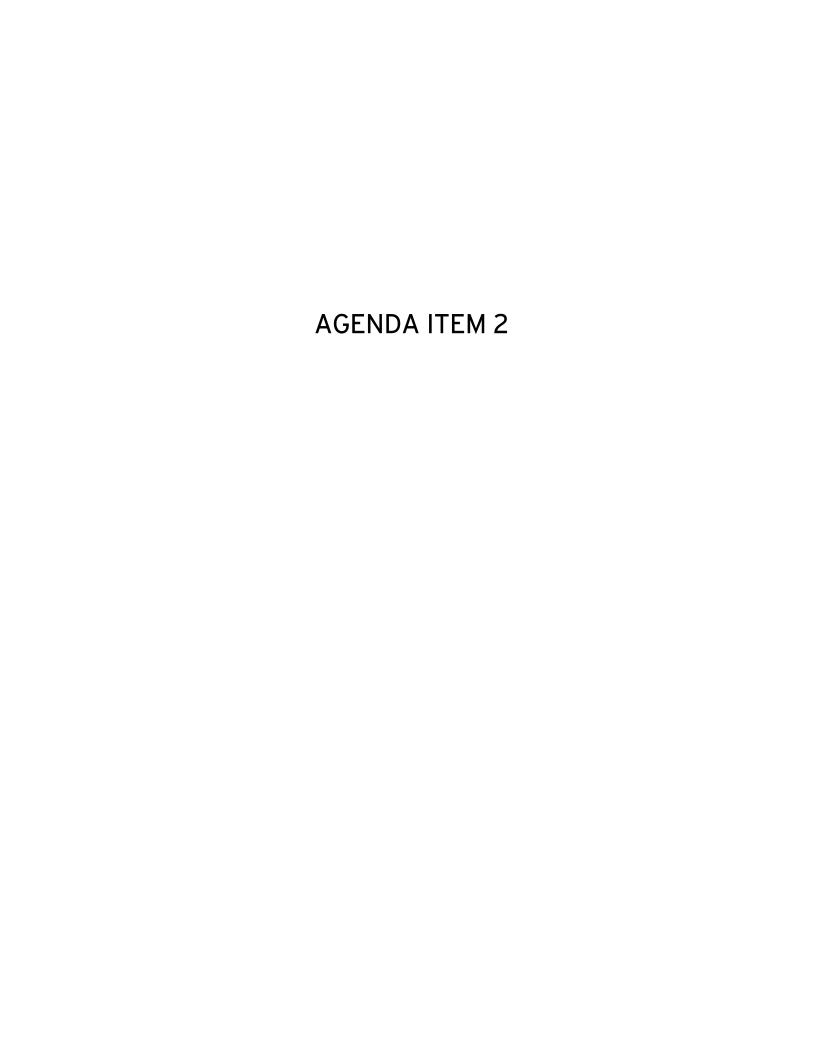
<sup>\*\*</sup> Final Document provided during the meeting or earlier \*\*\* Stand-alone document included in the binder

# TABLE OF CONTENTS - TBPOC, 1/19/06

INDEX TAB	AGENDA ITEM	DESCRIPTION	
1	1	No attachments	
2	2	Consent Calendar  a) December 12, 2005* b) December 14, 2005, Conference Call* c) December 22, 2005, Conference Call* d) December 29, 2005, Conference Call* e) January 04, 2006, Conference Call* f) January 11, 2006, (2:00 PM) Conference Call** g) January 11, 2006, (3:00 PM) Conference Call** h) January 11, 2006, (4:00 PM) Conference Call** i) Draft 2006 TBPOC Calendar*	
3	3	Draft Monthly Progress Report***	
4	4	Draft 4 <sup>th</sup> Quarter 2005 Report ***	
5	5	a) Estimate Update* b) Outstanding Bidder Inquiries Update and Feedback* c) SAS Communications*	
6	6	SFOBB East Span Skyway Contract a) Hinge Pipe Beam DRB Update*	
7	7	West Approach Project a) Risk Management Review*	
8	8	New Benicia-Martinez Bridge Contract a) CCO 71* b) CCO 99*	
9	9	Antioch and Dumbarton Study a) Study Update*	
10	10	TBPOC Meeting Preparation Procedure*  a) Meeting Attendance and Materials	
Second set 1	11	Status of Caltrans Toll Program Manager and East Span Project Manager Hiring*	
2	12	Other Business a) BATA/Caltrans Co-op Agreement*	









Joseph P. Bort MetroCenter 101 Eighth Street Oakland, CA 94607-4700 TEL 510.817.5700 TDD/TTY 510.817.5769 FAX 510.817.7848 E-MAIL info@mtc.ca.gov WEB www.mtc.ca.gov

#### Memorandum

TO: Toll Bridge Program Oversight Committee DATE: January 19, 2006

FR: Andrew Fremier

RE: Meeting Minutes and Draft 2006 TBPOC Calendar

Attached, for your review and approval, are:

1) Minutes for the following TBPOC meetings:

- December 12, 2005
- December 14, 2005, Conference Call
- December 22, 2005, Conference Call
- December 29, 2005, Conference Call
- January 04, 2006, Conference Call

#### 2) Draft 2006 TBPOC Calendar.

The following meeting minutes will be provided on the day of the January TBPOC meeting:

- January 11, 2006, (2:00 PM) Conference Call
- January 11, 2006, (3:00 PM) Conference Call
- January 11, 2006, (4:00 PM) Conference Call

#### **MINUTES**

Committee Meeting December 12, 2005

Meeting convened: 1:05 p.m.

Discussion	Assignee	Due
	·	
I. Chair's Report		
To accommodate schedules, the agenda order will be as follows:		
1. CCO 24		
2. Hinge Pipe Beam		
3. Definition of Public Enemy		
At 1:55 p.m., Will Kempton had to leave for another meeting and		
Diane Eidam acted as Chairperson for the remainder of the meeting.		
II. Consent Calendar		
• The November 23 Minutes should be corrected to show that the		
E2/T1 CCO was approved for \$81M.		
• The correction to the November 23 Minutes was made by hand.		
• All of the Minutes were approved as corrected and signed.		

- A. September 22, 2005 Minutes\*
- B. October 31, 2005 Conf. Call Minutes\*\*
- C. November 8, 2005 Conf. Call Minutes\*\*
- D. November 21, 2005 Meeting Minutes\*
- E. November 23, 2005 Conf. Call Minutes\*

# **III. Monthly Progress Report**

A. Draft December 2005 Progress Report

9		
The Draft Monthly Report is provided for comment and its	Andy	12/31/05
approval will require a conference call.	Fremier	
The 3 <sup>rd</sup> Qtr Report was well received by the Legislature and		
Secretary McPeak requests that future quarterly reports remain in		
the same format for ease of use.		

**IV. Timing of Toll Accounting Staff Transfer** 

• With the transfer of toll fund management to the Bay Area Toll	Andy	1/1/06
Authority, the responsibility for Toll Accounting is also moving	Fremier	
from the Department to BATA. This shift affects the		
employment of the current Department Toll Accounting Staff and		
is being addressed successfully by allowing Department staff to		
transfer to BATA. Any employee that opts out of the transfer will		
be retained by the Department.		
• The plan has been to affect the change in status with the		

	Τ	
defeasance of bonds scheduled in February, but the office space		
will be available in January. The Department supports an earlier		
transfer, but wants to make sure the Union agrees.		
V. SFOBB East Span Project		
A. Letter to Congressmembers Honda and Tauscher*		
When the letter is finalized by BATA cc will be transmitted to		
TBPOC members.		
B. TY Lin/Moffatt & Nichol Settlement*		
Responses to previous TBPOC comments have been incorporated,		
addressing legal and audit questions. It is being routed within the		
Department for signature. The Joint Venture will be available for		
support during the construction on an on-call basis.		
C. Definition of Public Enemy*		
• At the previous TBPOC Meeting, the staff briefed the members		
about a Bidders Inquiry about responsibility for terrorist acts and		
how the definition of Public Enemy in the Standard Specification		
applies. At the present time, terrorist acts are not considered acts		
of the Public Enemy and are therefore the responsibility of the		
contractor.		
• Insurance industry research since that first discussion has		
determined that the cost to a contractor for insurance is from		
\$0.5M to \$1.5M.		
Based upon the low cost of the insurance, the current		
specification could remain as written and in the response to the		
Bidders Inquiry, a statement issued indicating that acts of terror		
are not considered Acts of the Public Enemy.		
• The risk of such an event is low, so the Department could accept		
it, considering itself self-insured. This would require and		
addendum to the contract.		
• Input from Will Kempton is needed if an addendum is the option.	J. Tapping	12/15/06
• Schedule for TBPOC action at upcoming conference call meeting.		
Can Addendum No. 6 be issued by December 31?	J. Tapping	12/15/06
A PMT teleconference will be conducted prior to the TBPOC	J. Santos	12/14/06
meeting to clarify the options and actions.	J. Bullios	12/11/00
	l	
VI.SFOBB East Span SAS Contract		
A. Letter to Bidders GOAR update*	T.T	10/10/05
It is not possible to get a signature from the Governor by the	J. Tapping	12/19/06
December 16 <sup>th</sup> , so the GOAR will be changed to a CIR to secure		
the Secretary's signature.		
B. Addendum #5 Approval**		
Contractor Outreach on Nov. 30 focused on schedule and cash flow		
concerns raised through questions and comments from the potential		

<ul> <li>bidders. Based upon that Outreach, Addendum #5 includes theses major changes:</li> <li>Payment for fabricated material – unclear spec cleaned up</li> <li>Shop Drawing submittal and review – improvements made</li> </ul>		
<ul> <li>to the specification to reduce time impacts to the contract schedule</li> <li>Wood mock-ups could delay the project – the requirement was removed</li> </ul>		
Contract conflict with the YBI structures – removed the Hinge K intermediate milestone by shifting the point of interface  Learning in the contract deposition times in preceded the number of		
• Insufficient contract duration time - increased the number of contract working days by 6 months, not 1 year as requested, and in so doing continue to encourage multiple bids		
Ductility of Temporary Tower was debated at the Outreach, but the opportunity for benefit is minimal and no change was made.		
Look at "parking and boat access" description to allow for flexibility for contractor.	J. Tapping	12/22/05
Addendum #5 Approved with the plan to work with the successful contractor through the CRIP process to achieve "Open to Traffic" in 2012 and to keep the costs down.		
C. Addendum #6 Update*	T	T
<ul> <li>Staff plans to post this Addendum the first week of January. There will need to be a teleconference to secure approval.</li> <li>The TBPOC members would like to post it by December 31.</li> </ul>		
A teleconference on Addendum #6, including Monthly Report approval, will be arranged to make a December 31 or earlier posting possible.	J. Tapping	12/22/05
VII. SFOBB East Span Skyway Contract		
A. Hinge Pipe Beam DRB Update*	T	
The DRB hearing process has been completed. The DRB is now deliberating on the decision. They are supposed to conclude their deliberations within 30 days, although they have indicated they may need more time. Such an extension would release the finding by the middle of January 2006.		
VIII. SFOBB East Span South/South Detour Contr	act	
A. CCO 24 – Time Extension*	aoi	
Diane Eidam recused herself on this item and requested that Stephen Maller act in her place.		
• The tie-in to the existing structure was suspended due to a desire to minimize the amount of time that traffic would be on the detour. The rest of the work is continuing. There are options to		

<ul> <li>complete the tie-ins, which will be evaluated by the PMT.</li> <li>This Supplemental CCO adds 381 days and \$4.8M to cover added time-related overhead. Increases in the direct costs of the work are not included, but will likely be a couple million dollars.</li> <li>There is a companion funds request being processed within the Department.</li> </ul>		
There is a discrepancy between the forecast in the Monthly Report	Jon	12/19/05
pg. 16 and the approved budget. The Estimate at Completion shows	Tapping	
a greater funding need than the CCO funding chart. The method to		
determine the Forecast must be explained.		
Modify the Monthly Report forecasts to reflect the budget until a	Andy	12/19/05
consistent forecast method is run through for each contract.	Fremier	
CCO #24 approved at \$4.8 million.		

## IX.Review of BATA Organization

<del>-</del>		
Show the TBPOC on the charts to reflect that the TBPOC is	PMT	1/19/06
overseeing the organization through a reporting relationship. This		
will better reflect the team effort.		
Produce a multi-agency organization chart.	PMT	1/19/06

# X. Status of Caltrans Toll Program Manager and East Span Project Manager hiring

In the final stages of the process and the committee will be	
consulted before finalizing the decision.	

#### **XI.PMT Workshop plan**

The goal is to get the team working efficiently and effectively.	

#### XII. Other Business

Dumbarton and Antioch were mentioned in the 3 <sup>rd</sup> Quarter Report,	Mo	1/19/06
so we should give the Legislature the plan of action in the 4 <sup>th</sup>	Pazooki &	
Quarter Report.	Rick Land	
Thank you gift provided to Diane from MTC. She thanked the		
attendees on being a great team on great projects.		

## XIII. Next Meeting: January 19, 2006, 1:00 p.m., Bay Area

Adjourned: 2:25 p.m.

APPROVED BY:	
WILL KEMPTON, Director California Department of Transportation	Date
DIANE C. EIDAM, Executive Director California Transportation Commission	Date
STEVE HEMINGER, Executive Director Bay Area Toll Authority	Date

# MINUTES TBPOC CONFERENCE CALL December 14, 2005

Participants: Will Kempton, Chairperson; Steve Heminger, John Barna,

Randy Iwasaki, Andrew Fremier, Stephen Maller

Presenter – Jon Tapping (SFOBB Project Manager, Acting)

Meeting convened: 3:00 p.m.

As a follow-up to their December 12, 2005 meeting, the Toll Bridge Program Oversight Committee (TBPOC) held a conference call on December 14, 2005 to act on the following issue:

#### I. SAS Bridge Contract - Definition of Public Enemy

- The TBPOC provided comments on the definition of "public enemy" as it relates to SAS risk allocation, which was presented during the December 12, 2005 TBPOC meeting.
- The TBPOC had requested that additional research be conducted on the details of the "public enemy" definition in response to SAS bidder inquiries. To this end, Caltrans made an assessment and identified two options:
  - Option 1: Current SAS Contract/Risk Transfer/Contractor accepts risk or;
  - o Option 2: Risk Retention/Department accepts risk.
- TBPOC members (Kempton, Heminger, Eidam) approved moving forward with Option 2. This option involves issuing an addendum to broaden the public enemy definition to include "acts of terrorism."

APPROVED BY:	
WILL KEMPTON, Director California Department of Transportation	Date



# MINUTES TBPOC CONFERENCE CALL December 14, 2005

<b>Diane C. Eidam,</b> Executive Director California Transportation Commission	Date
COEVE HEMINGED F	Dete
STEVE HEMINGER, Executive Director Bay Area Toll Authority	Date

#### **MINUTES**

# TBPOC CONFERENCE CALL December 22, 2005

Participants: Will Kempton, Steve Heminger, John Barna, Rod McMillan, Randy Iwasaki, Andy Fremier, Stephen Maller and Jon Tapping

Meeting convened: 5:01 p.m.

#### I. SAS Bridge Contract Addendum No. 6 Approval

- This is the last planned addendum for this contract. If approved today, the
  addendum will be published by the end of the year providing the bidders a
  month to respond prior to bid opening.
- A summary of the major elements of the addendum was presented to the TBPOC. Not all changes identified to date are incorporated and will have to be addressed during construction, but none of these are expected to cost a great deal.
- The TBPOC unanimously approved Addendum No. 6 with the condition that when it is issued, the cover letter should state that "We expect this to be the final addendum, and we look forward to your bid on February 1."

#### **II.** Monthly Progress Report

- The PMT noted the opportunity to update the SAS risk management analysis in the Monthly Report to coincide with the 4<sup>th</sup> Quarter Report (to be issued in February), to reflect the presentation developed jointly by Caltrans, BAMC and Caltrop. This would make it possible to reflect actions taken to reduce some of the risks prior to bid opening.
- The TBPOC requested that the reports be left in their current format until the SAS bids are opened. The changes can be made to the 1<sup>st</sup> Quarter Report.
- The Draft Monthly Report has some recently identified schedule inconsistencies resulting from the TBPOC decision to extend the SAS Contract duration by six months and from other as yet undetermined reasons. Staff needs a few additional days to get the details corrected.
- On page 36 of the Draft Monthly Report, the Benicia-Martinez Potential Construction Issues table provides details that might put Caltrans and the TBPOC at a disadvantage when negotiating contractor claim settlements. Instead, the Report should discuss the risk factors without getting into the specifics of probability and cost. In addition, remove dollar scales on all Baseline vs. Current Risk comparisons.
- Staff will make the above changes and schedule another conference call on Thursday, December 29, for approval of the Monthly Progress Report.

#### III. Other Issues

- A. Public Relations
  - There would be value to have Director Kempton, Executive Director Heminger and MTC's Public Relations Deputy, Randy Rentschler, meet with a couple of key legislators before February 1<sup>st</sup>. The PMT must provide some potential scenarios and talking points prior to the meeting to ensure uniformity of communication.
- B. Quarterly Report
  - The TBPOC reiterated to the PMT that the Quarterly Reports should reflect information through the end of the reported quarter. The update on the February 1st SAS bid opening should be included in the cover memo transmitting the report or in a separate letter on February 2<sup>nd</sup> or 3<sup>rd</sup> before the report is issued.

Adjourned: 5:24 p.m.	
APPROVED BY:	
WILL KEMPTON, Director California Department of Transportation	Date
JOHN F. BARNA, Jr. Executive Director California Transportation Commission	Date
STEVE HEMINGER, Executive Director Bay Area Toll Authority	Date

#### **MINUTES**

# TBPOC CONFERENCE CALL December 29, 2005

Participants: Will Kempton, Steve Heminger, John Barna, Bijan Sartipi, Dan McElhinney, Jose Aguirre, Randy Iwasaki, Andy Fremier, Stephen Maller and Jon Tapping

Meeting convened: 3:33 p.m.

This follow-up meeting to the December 22 conference call is for approving the December 2005 Monthly Progress Report. Additionally, a letter received from American Bridge/Fluor JV dated December 27, 2005 was included in today's agenda for discussion.

Director Kempton started the meeting by formally welcoming new CTC Executive Director John Barna to the TBPOC.

#### I. December 2005 Monthly Progress Report

- There is a need for talking points to ensure consistent responses, internally
  and externally, to possible inquiries following publication of the Monthly
  Progress Report.
  - Page 6 of the Monthly Progress Report gives a summary of the major highlights and changes that have taken place between reports.
  - Page 9 which provides the SAS risk management information (to be updated for bid opening) is the type of information helpful to the TBPOC in addressing the press when these reports (monthly and quarterly) are distributed.
  - As far as talking points and media strategy, the PMT is working to coordinate with all pertinent offices to provide a high level of proper input to the media.
  - The steps that the PMT takes to plan ahead for media questions were summarized for the TBPOC, starting with reference to the Bay Bridge Communication Plan.
- The staff made the revisions previously agreed upon at the meeting on December 22.
- The report now reflects updated financial information through November, which was not available when the draft was e-mailed to the participants prior to the meeting.
  - The Seismic Funds increased by \$4 million due to a refund from the City of San Francisco as part of the West Span retrofit; and
  - The Richmond-San Rafael information next month will reflect the return of the exceptions from the contractor consistent with the Final Estimate.

• The TBPOC unanimously approved the release of the December 2005 Monthly Progress Report.

# II. American Bridge/Fluor JV (AB/F JV) Request for a Two-Month Bid Date Extension

- The seven issues enumerated in the AB/F JV letter of December 27 were briefly addressed.
- Responses to most issues are covered by applicable enhancements implemented under Addendum 6 and applicable bidder inquiry responses.
- The TBPOC agreed that the issues raised were not significant enough to warrant a two-month delay in the bid opening date.
- The TBPOC also agreed that Addendum No. 6 and bidder inquiry responses should sufficiently address the request for a 6-month extension of the milestone dates and that no change would be made in the contract duration.

#### III. Other Issues

- A. Bid Update
  - A letter from the Secretary to all prospective bidders asking them to bid is not advisable at this time and might be misunderstood.
  - To ensure that a competitive bidding pool still exists, Director Kempton will call the CEO's of the expected bidders before the TBPOC 1/19/06 meeting. A report on these conversations will be made at the TBPOC 1/19/06 Meeting.

#### B. Carquinez Bridge Demolition

- The Demolition effort has the potential to be a very visible and successful element of TBPOC's work and thereby produce a positive news release. This is particularly relevant to the Bay Bridge, since a successful demolition here will bode well for the demolition of the SFOBB cantilever section in the future.
- A brief presentation to show the staging of the demolition will be helpful to the TBPOC and will be scheduled.
- The Crockett officials are interested in holding a "Retirement of the Bridge Event" sometime in January; this would be similar to what was done for the ground breaking ceremony for the new bridge.
- The TBPOC authorized District Director Sartipi to work with the Crockett officials on this event to which the TBPOC would be invited.

Adjourned: 4:17 p.m.	
APPROVED BY:	
WILL KEMPTON, Director California Department of Transportation	Date
JOHN F. BARNA, Jr. Executive Director California Transportation Commission	Date
STEVE HEMINGER, Executive Director Bay Area Toll Authority	Date

#### **MINUTES**

#### TBPOC CONFERENCE CALL January 04, 2006

Participants: Will Kempton, John Barna, Dan McElhinney, Andy Fremier,

Rod McMillan and Jon Tapping

Convened: 3:04 p.m.

#### I. SAS Bid Opening Date Extension

#### A. Background

- The meeting was called to discuss the latest development on the American Bridge/Fluor JV's December 27 written request for a two-month extension to the bid opening date and a six-month extension to the milestone dates which was rejected during the December 29, 2005 TBPOC conference call.
- Secretary McPeak was notified of TBPOC's December 29 decision. She would like it reported to the Administration and have it reflected in the Monthly Report.
  - o Director Kempton indicated this will be done without mentioning specific bidder's names.
  - A Significant Issue Report is in process to report this to the Administration which could change according to what is decided at this meeting.

#### B. AB/F Issue

- AB/F indicated through a personal contact that they will not bid unless they get a two-month extension to the bid opening date due to the following:
  - The loss of Nippon Steel's participation in this project has put AB/F in a situation to look for bonding capability and find it difficult to submit a timely bid.
- AB/F was requested to send a letter describing their dilemma for consideration.
- Response to the AB/F's December 27 letter has yet to be posted pending result of this discussion.

#### II. Other Issue

- The other potential bidder, Kiewit, also indicated through another personal contact that they want six additional months in the contract. Kiewit has been requested to provide a bidder's inquiry to document this query so that a formal response can be made.
- The request to put their concerns in writing should hopefully be taken by the bidders as a sign that we are willing to consider their requests, and motivate them to continue their efforts to bid
- Additionally, an early attempt to contact the potential bidders' principals to discuss their concerns with the TBPOC should engage them positively.

#### III. Decision

- The TBPOC will call the principals of AB/F and Kiewit on Wednesday morning, January 11, and decide what to do on January 17.
- Staff will contact these bidders to arrange these teleconferences which will involve all the members of the TBPOC.
- Project Team will look into questions that might come up during these conversations and prepare the TBPOC accordingly.

Date

Adjourned: 3:29 p.m.

# WILL KEMPTON, Director California Department of Transportation Date JOHN F. BARNA, Jr. Executive Director California Transportation Commission

STEVE HEMINGER, Executive Director

Bay Area Toll Authority

# INSERT AGENDA ITEM 2f: January 11, 2006, (2:00 PM) Conference Call

# INSERT AGENDA ITEM 2g: January 11, 2006, (3:00 PM) Conference Call

# INSERT AGENDA ITEM 2h: January 11, 2006, (4:00 PM) Conference Call

#### Item2i\_TBPOC-calen\_19Jan2006 (draft as of September 1, 2005)

JANUARY 2006				
MON	TUE	WED	THU	FRI
HOLIDAY	0	4	_	0
2	3	BATA OC	5	6
9	10	11	12	13
HOLIDAY			TBPOC	
16	17		Pier 7 19	20
00	0.4	мтс	00	07
23	24	25	26	27
30	31			

2 - New Years Day Observed 16 - M L King Jr's Birthday No CTC Meeting, Tentative MTC Meeting subject to change

APRIL 2006				
MON	TUE	WED	THU	FRI
3	4	стс <b>5</b>	6	7
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47	40	40	ТВРОС	24
17	18	19	Sac 20	21
		MTC	стс	
24	25	стс 26		28

5, 26, 27 - CTC, Tentative Dates MTC Meeting subject to change

JULY 2006				
MON	TUE	WED	THU	FRI
3	HOLIDAY 4	5	6	7
10	11	вата ос <b>12</b>	13	14
17	18	19	TBPOC Pier 7 20	21
24	25	мтс стс <b>26</b>	сто <b>27</b>	28
31				

4 - Independence Day 26, 27 - CTC, Tentative Dates MTC Meeting subject to change

OCTOBER 2006				
MON	TUE	WED	THU	FRI
2	3	4	5	6
Holiday 9	10	вата ос <b>11</b>	12	13
16	17	18	TBPOC Sac <b>19</b>	20
23	24	мтс <b>25</b>	26	27
30	31			

9 - Columbus Day Meetings in Sacramento start @ 1:00 PM Meetings at Pier 7 start @ 10:00 AM

FEBRUARY 2006					
MON	TUE	WED	THU	FRI	
		СТС	СТС		
		1	2	3	
		BATA OC			
6	7	8	9	10	
HOLIDAY					
13	14	15	16	17	
HOLIDAY		MTC	TBPOC		
20	21	22	Sac 23	24	
27	28				

13 - Lincoln's Birthday 20 - Presidents Day 1, 2 - CTC, Tentative Dates MTC Meeting subject to change

MAY 2006				
MON	TUE	WED	THU	FRI
1	2	3	4	5
8	9	вата ос 10	11	12
15	16	17	18	19
22	23	мто <b>24</b>	TBPOC Pier 7 25	26
HOLIDAY 29	30	31		

29 - Memorial Day 14, 15 - CTC, San Francisco MTC Meeting subject to change

AUGUST 2006				
MON	TUE	WED	THU	FRI
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	TBPOC Sac <b>24</b>	25
28	29	30	31	

NOVEMBER 2006								
MON	TUE	WED	THU	FRI				
		стс <b>1</b>	стс <b>2</b>	3				
		BATA OC						
6	7	8	9	10				
13	14	мтс 15	TBPOC Pier 7 <b>6</b>	17				
20	21	22	23	24				
27	28	29	30					

23, 24 - Thanksgiving Day and day after

	MARCH 2006								
MON	TUE	FRI							
		1	2	3					
6	7	вата ос <b>8</b>	9	10					
13	14	стс <b>15</b>	стс 16	17					
20	21	мтс <b>22</b>	TBPOC Pier 7 <b>23</b>	24					
			1.6.7 20	HOLIDAY					
27	28	29	30	31					

31 - Cesar Chavez's Birthday 15, 16 - CTC, Tentative Dates MTC Meeting subject to change

	JUNE 2006								
MON	TUE	THU	FRI						
			1	2					
5	6	стс <b>7</b>	стс 8	9					
12	13	вата ос <b>14</b>	15	16					
19	20	21	TBPOC Sac <b>22</b>	23					
26	27	мтс 28	29	30					

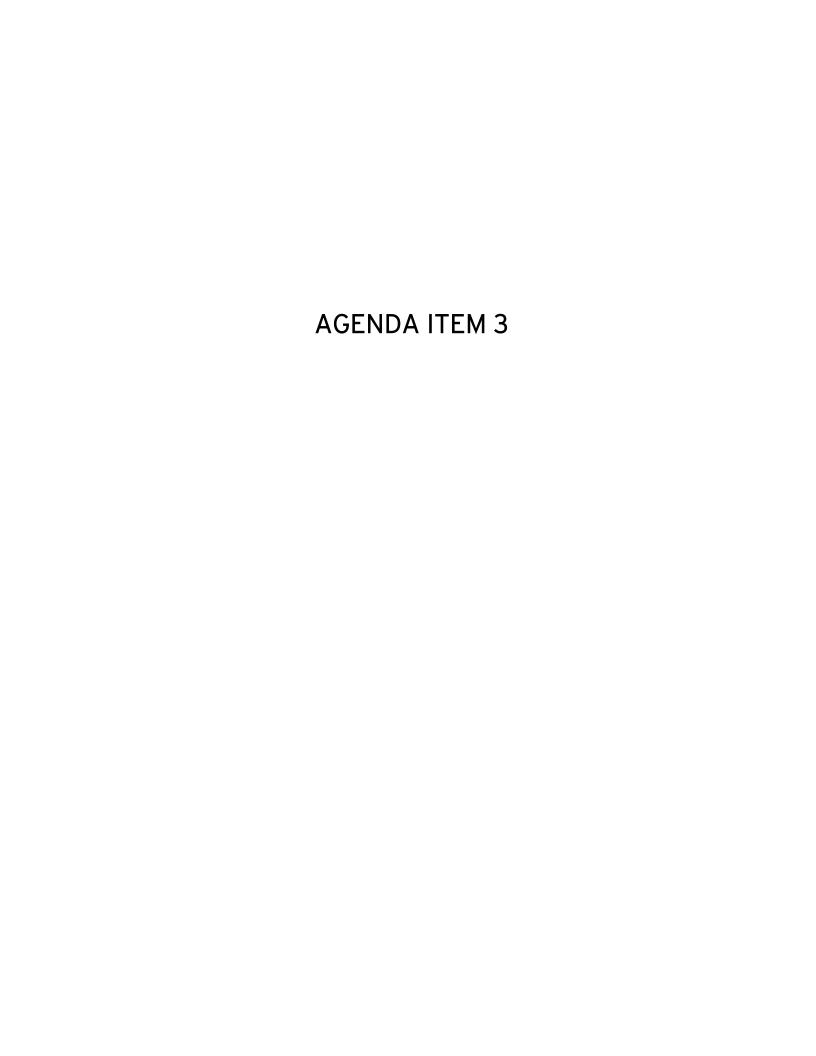
7, 8 - CTC, Tentative Dates MTC Meeting subject to change

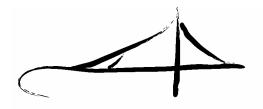
SEPTEMBER 2006								
MON	TUE	WED	THU	FRI				
HOLIDAY								
4	5	6	7	8				
		BATA OC	CTC					
11	12	стс 13	14	15				
			TBPOC					
18	19	20	Pier 7 21	22				
		MTC						
25	26	27	28	29				

4 - Labor Day

DECEMBER 2006.									
MON	TUE	TUE WED THU							
				1					
	_	0	_						
4	5	6	/	8					
	40	BATA OC	СТС	4-					
11	12	стс 13		15					
		MIC	TBPOC						
18	19	20	Sac <b>21</b>	22					
25	26	27	28	29					

25 - Christmas Day observed





Joseph P. Bort MetroCenter 101 Eighth Street Oakland, CA 94607-4700 TEL 510.817.5700 TDD/TTY 510.817.5769 FAX 510.817.7848 E-MAIL info@mtc.ca.gov WEB www.mtc.ca.gov

**DATE:** January 19, 2006

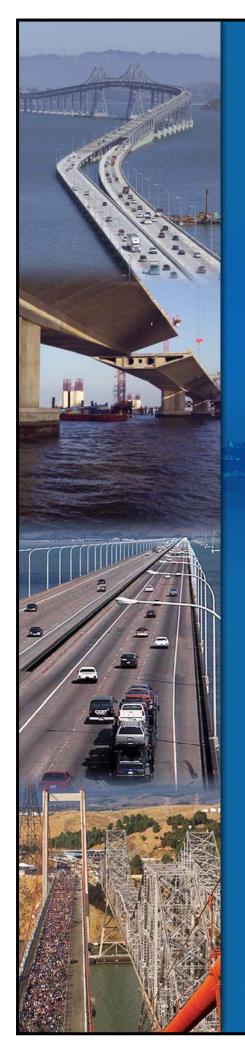
#### Memorandum

TO: Toll Bridge Oversight Committee

FR: Andrew Fremier

RE: <u>Draft January 2006 Monthly Progress Report</u>

Clipped to the Meeting Materials Binder, for your information, is a Draft Monthly Progress Report January 2006.



# **Toll Bridge Seismic Retrofit and Regional Measure 1 Programs**

Monthly Progress Report January 2006

**DRAFT** 

**Toll Bridge Program Oversight Committee** 







Released: February 2006



# **Toll Bridge Seismic Retrofit and Regional Measure 1 Programs**

Monthly Progress Report January 2006

# **Toll Bridge Program Oversight Committee**



California Department of Transportation



Bay Area Toll Authority

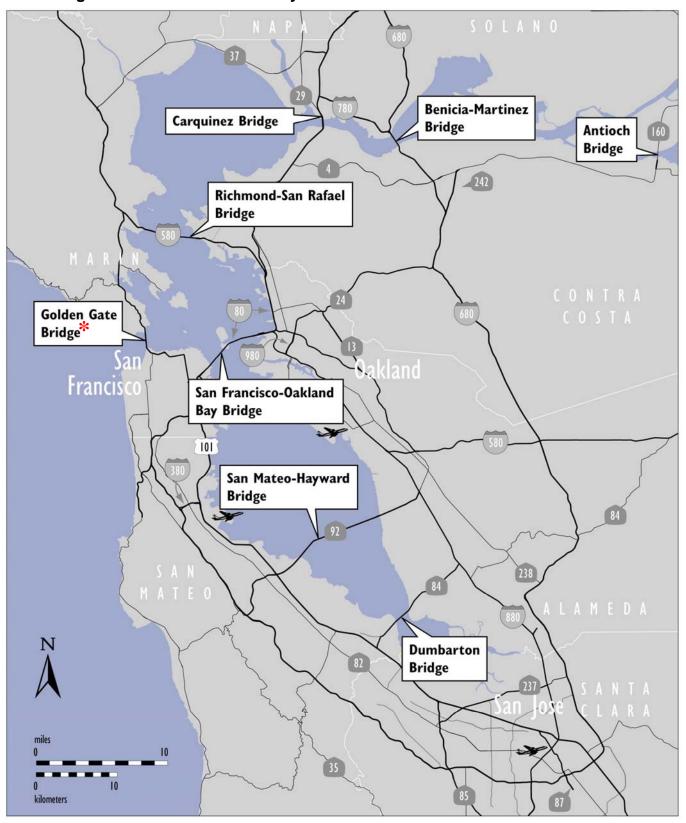


California Transportation Commission

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#### Toll Bridges of the San Francisco Bay Area



<sup>\*</sup> Under the Jurisdiction of the Golden Gate Bridge, Highway and Transportation District

#### INTRODUCTION

In July 2005, Assembly Bill 144, Hancock (AB 144) created the Toll Bridge Project Oversight Committee (TBPOC) to implement a project oversight and project control process for the Benicia-Martinez Bridge project and the state toll bridge seismic retrofit program projects. Comprised of the Caltrans Director, the Bay Area Toll Authority (BATA) Executive Director and the Executive Director of the California Transportation Commission (CTC), the TBPOC's project oversight and control processes include but are not limited to reviewing bid specifications and documents, providing field staff to review ongoing costs, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the committee) and preparing project reports.

AB 144 identified the Toll Bridge Seismic Retrofit Program and the new Benicia-Martinez Bridge Project as under the direct oversight of the TBPOC. The Toll Bridge Seismic Retrofit Program includes:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Construction
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
Eastbound Carquinez Bridge Seismic Retrofit	Complete
Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The new Benicia-Martinez Bridge is part of a larger program of toll-funded projects, called the Regional Measure 1 (RM1) Toll Bridge Program, under the responsibility of the BATA. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans (CT) will continue to report on their progress as an informational item. The RM1 program includes:

RM1 Projects	Open to Traffic Status
New Benicia-Martinez Bridge	Construction
1927 Carquinez Bridge Demolition	Construction
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Design
Interstate 880/State Route 92 Interchange Reconstruction	Design
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open

This report focuses on identifying critical project issues and monitoring project cost and schedule performance for the projects as measured against approved budgets and schedule milestones. This report is intended to fulfill Caltrans' requirement to provide monthly project progress reporting to the TBPOC under Section 30952.05 of the Streets and Highway Code.

#### **EXECUTIVE SUMMARY**

#### Toll Bridge Seismic Retrofit Program—Cost (\$Millions)

Project	Work Status	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	i
SFOBB East Span Replacement Project								
Capital Outlay Support		959.4	-	959.4	393.6	977.1	17.7	•
Capital Outlay Construction								
Skyway	Construction	1,293.0	-	1,293.0	946.0	1,293.0	-	•
SAS Superstructure	Advertise	1,753.7	-	1,753.7	-	1,767.4	13.7	•
SAS E2/T1 Foundations	Construction	313.5	-	313.5	65.6	313.5	-	•
YBI Transition Structures	Design	299.3	-	299.3	-	318.4	19.1	•
Oakland Touchdown	Design	283.8	-	283.8	-	272.7	(11.1)	•
South/South Detour	Design/ Const	131.9	-	131.9	29.3	133.8	1.9	•
Existing Bridge Demolition	Design	239.2	-	239.2	-	222.0	(17.2)	•
Stormwater Treatment Measures	Design	15.0	-	15.0	-	15.0	-	•
East Span Completed Projects		90.3	-	90.3	89.0	90.3	-	
Right-of-Way and Environmental Mitigation		72.4	-	72.4	38.7	72.4	-	•
Other Budgeted Capital		35.1	-	35.1	_	11.0	(24.1)	
Total SFOBB East Span Replacement Project		5,486.6	-	5,486.6	1,562.2	5,486.6	-	
SFOBB West Approach Replacement	Construction							•
Capital Outlay Support		120.0	-	120.0	70.1	120.0	-	
Capital Outlay Construction		309.0	-	309.0	174.7	309.0	-	
Total SFOBB West Approach Replacement		429.0	-	429.0	244.8	429.0	-	
Richmond-San Rafael Bridge Retrofit	Construction							•
Capital Outlay Support		134.0	-	134.0	122.3	127.0	(7.0)	
Capital Outlay Construction		780.0	-	780.0	666.1	698.0	(82.0)	
Total Richmond-San Rafael Bridge Retrofit		914.0		914.0	788.4	825.0	(89.0)	
Program Completed Projects	Complete							
Capital Outlay Support		219.8	-	219.8	219.3	219.8	-	
Capital Outlay Construction		705.6	-	705.6	698.0	705.6	-	
Total Program Completed Projects		925.4	-	925.4	917.3	925.4	-	
Miscellaneous Program Costs		30.0	-	30.0	25.1	30.0	-	
Program Contingency		900.0	-	900.0	-	989.0	89.0	
Total Toll Bridge Seismic Retrofit Program		8,685.0	-	8,685.0	3,537.8	8,685.0	-	

Within Approved Schedule and Budget

Option Potential Cost and Schedule Impacts: Possible future need for Program Contingency Allocation

Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming
 Note: Details may not sum to totals due to rounding effects.

#### Toll Bridge Seismic Retrofit Program—Schedule

Project	Project Complete AB 144 / SB 66 Baseline	Project Complete Forecast	Schedule Variance (Months)	Schedule Status	Remarks
a	b	С	d = c - b	е	f
SFOBB East Span Replacement Project Skyway	Apr 07	Apr 07	<u>-</u>		Fabrication issues concerning the Skyway hinge pipe beams could impact project schedule and budget. See page 10.
SAS E2/T1 Foundations	Jun 08	Mar 08	(3)	•	The suspension of work on this contract has been lifted. The TBPOC has approved the Contract Change Order (CCO) that restarts the work. See page 14.
SAS Superstructure	Mar 12	Sep 12	6	•	This contract is being re-advertised. Addendum #5 to the SAS Contract, issued by Caltrans on 12/21/05, extends the completion schedule for the SAS by 6 months. See pages 9, 12 and 13.
YBI Transition Structures	Nov 13	May 14	6		
Oakland Touchdown (OTD)	Nov 13	May 14	6		
OTD Submarine Cable	n/a	Jul 07	-	•	
OTD Westbound	n/a	Jul 09	-	•	
OTD Eastbound	n/a	May 14	6		
YBI South/South Detour	Jul 07	Jul 07	-		Schedule is being assessed.
Existing Bridge Demolition	Sep 14	Mar 15	6		
Stormwater Treatment Measures	Mar 08	Jul 08	4	•	
Open to Traffic Date: West Bound	Sep 11	Mar 12	6	•	
Open to Traffic Date: East Bound	Sep 12	Mar 13	6	•	
SFOBB West Approach Replacement	Aug 09	Aug 09	-	•	
Richmond-San Rafael Bridge Retrofit	Aug 05	Oct 05	2	•	Seismic retrofit completed July 29, 2005. Formal acceptance of this contract on October 28, 2005.

## Regional Measure 1 Program—Cost (\$Millions)

Project	Work Status	July 2005 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	i
New Benicia-Martinez Bridge Project	Construction							•
Capital Outlay Support		157.1	21.1	178.2	140.4	178.2	-	
Capital Outlay Construction		861.6	143.1	1,004.7	721.5	1,004.7	-	
Capital Outlay Right-of-Way		20.4	(0.1)	20.3	12.0	20.3	-	
Project Reserve		20.8	39.0	59.8	4	59.8	-	
Total New Benicia-Martinez Bridge Project		1,059.9	203.1	1,263.0	873.9	1,263.0	-	
Carquinez Bridge Replacement Project	Construction							•
Capital Outlay Support		124.4	-	124.4	114.0	125.4	1.0	
Capital Outlay Construction		381.2	-	381.2	356.1	383.3	2.1	
Capital Outlay Right-of-Way		10.5	-	10.5	9.9	10.5	-	
Project Reserve		12.1	-	12.1	-	9.0	(3.1)	
Total Carquinez Bridge Replacement Project		528.2	-	528.2	480.0	528.2	-	
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Design							
Capital Outlay Support		8.0	-	8.0	1.5	8.0	-	
Capital Outlay Construction		16.9	-	16.9	-	20.7	3.8	
Project Reserve		0.1	-	0.1	-	-	(0.1)	
Total Richmond-San Rafael Bridge Deck Overlay Rehabilitation		25.0	-	25.0	1.5	28.7	3.7	
I-880/SR-92 Interchange Reconstruction	Design							
Capital Outlay Support		28.8	-	28.8	25.8	43.2	14.4	
Capital Outlay Construction		94.8	-	94.8	-	119.0	24.2	
Capital Outlay Right-of-Way		9.9	-	9.9	7.3	13.0	3.1	
Project Reserve		0.3	-	0.3	-	11.1	10.8	
Total I-880/SR-92 Interchange Reconstruction		133.8	-	133.8	33.1	186.3	52.5	
Program Completed Projects	Complete							
Capital Outlay Support		54.0	-	54.0	53.8	55.5	1.5	
Capital Outlay Construction		307.6	-	307.6	289.5	296.7	(10.9)	
Capital Outlay Right-of-Way		1.5	-	1.5	0.5	0.6	(0.9)	
Project Reserve		1.8	-	1.8	0.2	0.7	(1.1)	
Total Program Completed Projects		364.9	-	364.9	344.0	353.5	(11.4)	
Total Regional Measure 1 Program		2,111.8	203.1	2,314.9	1,732.5	2,359.7	44.8	

Within Approved Schedule and Budget

Note: Details may not sum to totals due to rounding effects.

O Potential Cost and Schedule Impacts

Known Cost and Schedule Impacts

# Regional Measure 1 Program—Schedule

Project	Project Complete Baseline	Project Complete Forecast	Schedule Variance (Months)	Schedule Status	Remarks
a	b	С	d = c - b	е	f
New Benicia-Martinez Bridge Project				•	
<ul> <li>New Benicia-Martinez Bridge Open to Traffic Date</li> </ul>	Dec 07	Dec 07		•	On 12/21/05, BATA approved a budget revision for the project to a
New Bridge Construction Complete	Dec 07	Feb 08	2		total budget of \$1.263 billion.
1927 Carquinez Bridge Demolition Project	Dec 07	Sep 07	(3)	•	
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Jan 07	Jan 07	-	•	Staff has reviewed the project estimate. See page 39.
I-880/SR-92 Interchange Reconstruction	Nov 10	Dec 10	1	•	Environmental clearance issues have impacted the cost/schedule for this project. See page 40.

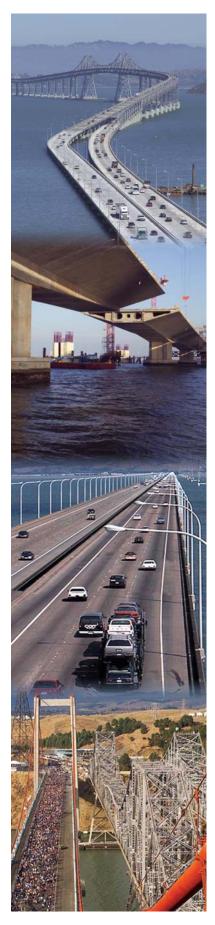
## Highlight of Project/Program Activities and Changes for January 2006

## **Toll Bridge Seismic Retrofit Program**

- ♦ Caltrans has completed the issuance of addenda for the SAS contract, having issued Addendum #6 in December. Bid opening for this contract is scheduled for February 1, 2006. See page 12.
- ♦ The completion of the YBI Transition Structures, the Oakland Touchdown and the existing Bridge Demolition contracts has been extended by 6 months due to Addendum 5 to the SAS contract. The impact to the YBI South/South Detour contract is being assessed. See pages 9 and 19.
- Caltrans is in the process of finalizing project plans and specifications for a public access lot on the Marin side of the Richmond-San Rafael Bridge to comply with a BCDC permit condition. See page 25.

#### **Regional Measure 1 Program**

♦ The Benicia-Martinez Bridge Toll Plaza and Administration Building has been operating under liquidated damages since October 2005. A hearing with the Dispute Resolution Board (DRB) will be held in January 2006 to resolve this issue. See page 35.



# **PROJECT / CONTRACT REPORTS**

# Toll Bridge Seismic Retrofit Program

San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary

- Skyway Contract
- Self-Anchored Suspension (SAS) Superstructure Contract
- Self-Anchored Suspension (SAS) E2/T1 Foundation Contract
- Yerba Buena Island (YBI) South/South Detour Contract
- Other Major Contracts in Design
- Other Contracts and Related Project Work

San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project

Richmond-San Rafael Bridge Seismic Retrofit Project Other Completed Seismic Retrofit Projects

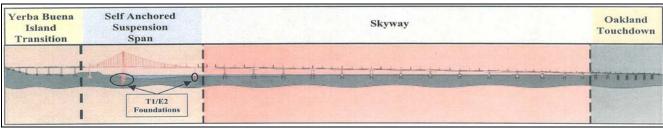
## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary

Project Description: The East Span will be seismically retrofitted through the complete replacement of the existing span. The remaining effort for this project consists of the following contracts: Skyway—construction of two parallel concrete structures, each approximately 1.3 miles in length; Self-Anchored Suspension (SAS) Foundation—construction of SAS marine foundations; SAS Superstructure—construction of a self-anchored 385-meter main span superstructure incorporating a 160-meter fabricated structural steel tower with a main cable and inclined suspenders that will support steel orthotropic decks; Yerba Buena Island (YBI) South/South Detour—design and construction of a temporary double-deck bypass structure that will detour traffic to the existing SFOBB while completing the westerly permanent tie-in structure of the new East Span at Yerba Buena Island; YBI Structures—construction of a new structure connecting the western end of the self-anchored suspension to the Yerba Buena Island viaduct, which will be retrofitted; Oakland Touchdown—at the Oakland end of the East Span, construction of two parallel, cast-in-place post-tensioned concrete viaducts, which join the skyway to the at-grade Oakland approach fill; and Existing Bridge Demolition—demolition of the existing 1936 SFOBB East Span structure after the construction and placement of traffic onto the new East Span.

**SFOBB East Span Replacement Cost Summary (\$Millions)** 

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at * Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	959.4	-	959.4	393.6	977.1	17.7
Capital Outlay Construction	-	-	-	-	-	-
Skyway	1,293.0	-	1,293.0	946.0	1,293.0	-
SAS Superstructure	1,753.7	-	1,753.7	-	1,767.4	13.7
SAS E2/T1 Foundations	313.5	-	313.5	65.6	313.5	-
YBI Structures	299.3	-	299.3	-	318.4	19.1
Oakland Touchdown	283.8	-	283.8	-	272.7	(11.1)
YBI South/South Detour	131.9	-	131.9	29.3	133.8	1.9
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	-	15.0	-	15.0	-
East Span Completed Projects	90.3	-	90.3	89.0	90.3	-
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.7	72.4	-
Other Budgeted Capital	35.1	-	35.1	-	11.0	(24.1)
TOTAL	5,486.6	-	5,486.6	1,562.2	5,486.6	-

Note: Details may not sum to totals due to rounding effects.



SFOBB East Span Replacement Project

#### **SFOBB East Span Replacement Schedule Summary**

Contract	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
Skyway	April 2007	April 2007	-
YBI South / South Detour*	July 2007	July 2007	-
Stormwater Treatment Measures	March 2008	July 2008	4
SAS E2/T1 Foundations	June 2008	March 2008	(3)
Open to Traffic: West Bound	September 2011	March 2012	6
SAS Superstructure	March 2012	September 2012	6
Open to Traffic: East Bound	September 2012	March 2013	6
Oakland Touchdown*	November 2013	May 2014	6
YBI Transition Structure*	November 2013	May 2014	6
Existing Bridge Demolition*	September 2014	March 2015	6

<sup>\*</sup> Contract schedules being assessed due to changes in SAS schedule.

**Project Status**: Construction is currently ongoing on the Skyway and the YBI South/South Detour contracts. The SAS E2/T1 Foundation contract has been restarted and the SAS Superstructure contract has been readvertised. Caltrans issued Addendum #5 and Addendum #6 to the SAS contract in December 2005. See the following contract detail pages for more information. As part of an ongoing cost review process, Caltrans is reporting changes to the Estimate at Completion amounts for the project. Currently, these charges can be funded from contingencies in Other Budgeted Capital.

Given that Addendum 5 extended the SAS contract by 6 months in response to bidder inquiries, and to attract more bids and decrease project costs, there has been a like impact to the East Bound Open to Traffic date. This 6-month delay to the east bound traffic date has likewise posed a 6-month delay to the completion of the Oakland Touchdown, YBI Transition Structure and the Existing Bridge Demolition contracts: certain work scopes for all of these contracts cannot commence until east bound traffic has been placed onto the new span.

**Project Issues:** The results of the preliminary SAS and E2-T1 contract quantitative schedule risk analysis indicate that there is approximately an eighty percent probability that the SAS contract date of completion may be extended (whether by contractor, third party, weather, owner, or other excusable delay) by up to 21 months from the AB 144 / SB 66 schedule. It should be noted that this preliminary probabilistic schedule analysis does not consider many of the schedule risk responses subsequently identified and implemented, such as implementation of the fabrication action and solution team (FAST), and ongoing SAS contract addenda enhancements. Moreover, about half of the contract extension potential relates to the submission and review of tower shop drawings, and the fabrication and delivery of the lower tower sections. Contentious issues regarding quality and code interpretations may arise during review of shop drawings. There is considerable welding involved in the fabrication of the tower sections, giving rise to possible issues due to tight tolerances and different interpretations of welding codes and welding sequences. While these delay potentials exist now, there are risk responses such as FAST, the campus concept for integrating supplier/fabricator/Caltrans teams, and a review of the COS resources that can mitigate many of the delay-causing possibilities. As these responses will be implemented, their effectiveness in reducing the delay risks will be reassessed, and the schedule delay risk will be adjusted accordingly. Caltrans and TBPOC are and will be taking affirmative actions to mitigate any potential issues that may lead to schedule delays as described in the risk management plan.

**Recent TBPOC Actions:** In November 2005, the TBPOC approved Addendum #4 to the SAS bid documents, as well as the contract change order that restarts work on the SAS E2/T1 Foundation contract. In December 2005, The TBPOC approved Addendum #5 and Addendum #6 for the SAS contract. See the following contract detail pages for more information.

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### SKYWAY CONTRACT

**Contract Description:** The Skyway contract constructs two parallel pre-cast concrete approach spans from Oakland to the self-anchored suspension span near Yerba Buena Island.

**Skyway Cost Summary (\$Millions)** 

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
East Span - Skyway						
Capital Outlay Support	197.0	-	197.0	117.6	197.0	-
Capital Outlay Construction	1,293.0	-	1,293.0	946.0	1,293.0	-
TOTAL	1,490.0	-	1,490.0	1,063.6	1,490.0	-

Note: Details may not sum to totals due to rounding effects.

#### **Skyway Schedule Summary**

Contract	Baseline Contract Completion Date	Forecast Contract Completion Date	Variance (Months)	
East Span - Skyway	April 2007	April 2007	-	

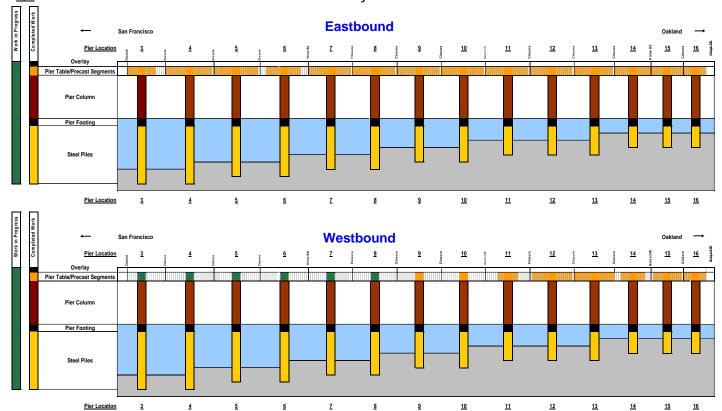
Contract Status: The Skyway contract is currently in construction and is 84% complete as of December 20, 2005. The Foundation work is complete with the exception of installing Fenders around six of the pier footings. The Fender work is currently scheduled to begin in January 2006 and be completed by September 2006. The last remaining pier column was completed in late December 2005. The Pier Tables are 79% complete with last remaining six Pier Tables in various stages of construction. Completion of the Pier Tables is scheduled for June 2006. Segment erection is currently 63% complete. The Eastbound structure is 96% complete with only 10 segments remaining to be completed, while the Westbound structure is 30% complete with 158 segments remaining to be completed. Erection activities are currently at Pier E9W and Pier E11W. Delivery of Hinge "BE" Pipe Beams are scheduled for January 2006. The eastbound Orthotropic Box Girder is scheduled to ship on January 9th, 2006 from USI in Portland Oregon, however, the shipment date has been delayed due to poor weather that was unacceptable for marine transport. Erection of the box girder is scheduled for January 23rd. Bike Path cantilever beams continue to be installed with 80% complete, while the installation of the panel segments has begun and is currently 5% complete. The Stockton pre-cast yard continues to maintain their steady pace of casting one concrete bridge segment every two to three days in each of the two casting beds or roughly 5 segments per week. Currently, 403 of 452 segments or 89% have been cast with the remaining 49 segments scheduled to be complete by June 2006. A total of 284 segments (63%) have been installed to date.

## **Contract Issues:**

Issue	Mitigating Action
A schedule delay is currently projected by the contractor due to issues with the fabrication of the hinge pipe beams that connect the major frames of the bridge.	While Caltrans is evaluating the contractor's fabrication methodology for the pipe beams, the contractor is currently mitigating the schedule delays by resequencing segment erection activities. The projected delay to the Skyway project is not expected to delay the overall open-to-traffic date for the East Span Replacement project.
	NOPC #11, regarding the Hinge Pipe Beam issues was heard by the Dispute Resolution Board (DRB) in November and December with two, two-day hearings. The Board's decision is expected in January 2006.
KFM issued 11 NOPC's on behalf of USI for welding issues related to the fabrication of the Steel Orthotropic Box Girders (SOBG).	USI continues fabrication of the SOBG with continued inspection by the Department. All NOPC's filed were recommended to be heard by the DRB, with the first three issues scheduled for March 2006.

Recent TBPOC Actions: None.

# San Francisco-Oakland Bay Bridge East Span Replacement Project - Skyway Contract January 2006



## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ▶ SELF-ANCHORED SUSPENSION (SAS) SUPERSTRUCTURE CONTRACT

**Contract Description:** The Self-Anchored Suspension (SAS) Superstructure contract constructs a signature tower span between the skyway and the Yerba Buena Island transition structure. Work on the SAS bridge has been split between three contracts—the SAS Superstructure (in advertisement), the SAS E2/T1 Foundation (under construction), and the SAS W2 Foundation (completed).

**SAS Superstructure Cost Summary (\$Millions)** 

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	e	f	g = f - d
East Span - SAS Superstructure						
Capital Outlay Support	214.6	-	214.6	15.5	214.6	-
Capital Outlay Construction	1,753.7	-	1,753.7	-	1,767.4	13.7
TOTAL	1,968.3	-	1,968.3	15.5	1,982.0	13.7

Note: Details may not sum to totals due to rounding effects.

#### **SAS Superstructure Schedule Summary**

Contract	Baseline Contract Completion Date	Forecast Contract Completion Date	Variance (Months)	
East Span - SAS Superstructure	March 2012	September 2012	6	

**Contract Status:** The SAS Superstructure Contract was re-advertised on August 1, 2005. Bid opening is scheduled for February 1, 2006. Two outreach sessions were held during August, 2005. A Contractor/Fabricator/Supplier meeting was held on September 23, 2005. A final outreach meeting for potential bidders was held on November 30, 2005. Caltrans has evaluated and responded to contractor inquiries (264 as of 12/30/05, 224 have been responded to) and has completed all addenda to be issued against the contract plans and specifications. Key technical issues addressed in the six addenda issued included the following:

- Caltrans has identified areas for clarifications to the contract specifications to improve the method of work for the project.
- ♦ Caltrans has determined specification revisions to be included in addenda.
- Caltrans has deleted the first Contract Interim Milestone (Completion of the W2 cap beam) and has extended the contract time for completing the various Contract Milestones including overall Contract Completion by 6 months.

The estimate-at-completion forecast for the project was increased by \$13.7 million to cover actions taken to encourage additional bidders for the project, including the increase to the bidder's stipend to \$3 million for the lowest three responsive bidders, and to accelerate delivery of the project, including accelerating working drawing and progress schedule submittals. Currently, these charges can be funded from contingencies in Other Budgeted Capital.

#### **Contract Issues:**

## Issue Mitigating Action

Caltrans' Risk Management evaluation of the project identified the potential lack of bidder competition as the greatest risk to maintaining project cost and schedule.

To increase number of bidders, the TBPOC has approved actions to de-federalize the SAS contract, revise the Cost Reduction Incentive Program (CRIP) to be more financially advantageous to contractors, increase the bidder's stipend to \$3 million to the lowest three responsive bidders, and hold additional contractor outreach sessions.

Recent TBPOC Actions: In November 2005, the TBPOC approved Addendum #4, which is comprised of a number of technical specification changes, including revisions based on bidder inquiries. In December 2005, the TBPOC approved Addendum #5 for the SAS Contract, which extended the completion schedule for the project by 6 months and provided for contractor access from the Oakland Mole via Westbound OTD and Skyway. Addendum #5 was issued by Caltrans on December 21, 2005. Also, in December 2005, the TBPOC approved Addendum #6 which consisted of various specification changes.

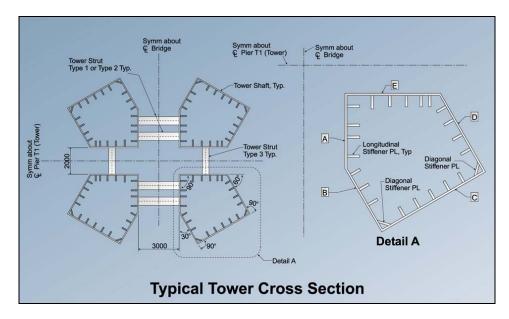
#### **Contract Photographs**



SAS Superstructure Artist Rendition



Western end of the Skyway contract that will connect with the future SAS contract



## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ▶ SELF-ANCHORED SUSPENSION (SAS) E2/T1 FOUNDATIONS CONTRACT

**Contract Description:** The Self-Anchored Suspension (SAS) E2/T1 Foundation contract constructs the main tower foundation at T1 and the adjacent east foundation at E2.

SAS E2/T1 Foundation Cost Summary (\$ Millions)

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion *	Variance
а	b	С	d = b + c	е	f	g = f - d
East Span - SAS E2 / T1 Foundations						
Capital Outlay Support	52.5	-	52.5	7.5	52.5	-
Capital Outlay Construction	313.5	-	313.5	65.6	313.5	-
TOTAL	366.0	-	366.0	73.1	366.0	-

Note: Details may not sum to totals due to rounding effects.

SAS E2/T1 Foundation Schedule Summary

Contract	Baseline Contract	Forecast Contract	Variance
	Completion Date	Completion Date	(Months)
East Span - SAS E2 / T1 Foundations	June 2008	March 2008	(3)

Contract Status: Work on the project was suspended in January 2005. Approximately 29% of the work on the project was completed prior to the suspension of work. Most of the completed work was the fabrication of steel piles. The original contract cost for the project was \$177 million. On July 29, 2005, Caltrans notified the contractor to restart the work on the project. The proposal for the revised schedule was received from the contractor on September 23, 2005. The contractor has signed a change order involving contract changes and compensation for the suspension and re-start of work. Contractor has set the steel template for the piling for the T1 foundation and is continuing with field preparations for the restart work.

## **Contract Issues:**

Issue	Mitigating Action
Gaining firm commitment dates for cost-effective steel delivery from suppliers as part of E2/T1 Foundations restart is critical to resuming work.	Caltrans is focused on staying current with issues concerning the restart of the steel supply, to include replacing suppliers if required.

**Recent TBPOC Actions:** In November 2005, the TBPOC approved CCO #29 concerning the restart of work on this contract. This executed CCO added \$81 million in cost (within the contract budget) and reduced the contract schedule by 3 months.



T1 = Foundation for the 530-foot steel tower E2 = Eastern Support of the suspension roadway W2 = Western Support of the suspension roadway



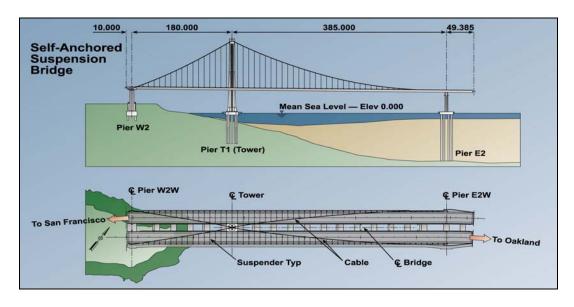
T1 Template before placement



Pile Template for the T1 foundation viewed from YBI



T1 Template as seen from Pier 1 Treasure Island



## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ▶ YERBA BUENA ISLAND (YBI) SOUTH/SOUTH DETOUR CONTRACT

**Contract Description:** The Yerba Buena Island (YBI) South/South Detour Contract constructs a temporary detour from the YBI tunnel to the existing east span of the Bay Bridge. This detour maintains traffic on the existing bridge while the YBI Transition Structure Contract completes the tie-in from the SAS to the existing tunnel.

#### YBI South/South Detour Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
YBI South/South Detour						
Capital Outlay Support	29.5	-	29.5	13.5	29.5	-
Capital Outlay Construction	131.9	-	131.9	29.3	131.9	-
TOTAL	161.4	-	161.4	42.8	161.4	-

Note: Details may not sum to totals due to rounding effects.

#### YBI South/South Detour Schedule Summary

Contract	Baseline Contract Completion Date	Forecast Contract Completion Date	Variance (Months)
YBI South / South Detour *	July 2007	July 2007	-

<sup>\*</sup> Contract schedule under assessment. See Contract Issues below.

**Contract Status:** The contract is 35% complete as of December 20, 2005. To minimize impacts on the traveling public, portions of the East and West Tie-in operations remain suspended. The contract is performance based, whereby the contractor is responsible for both designing and constructing the detour structures. The contractor has formed and poured columns at Bents 48 and 49. Construction of the other bents is also in progress. The contractor's engineer continues to perform design work on the east and west tie-in structures for the detour.

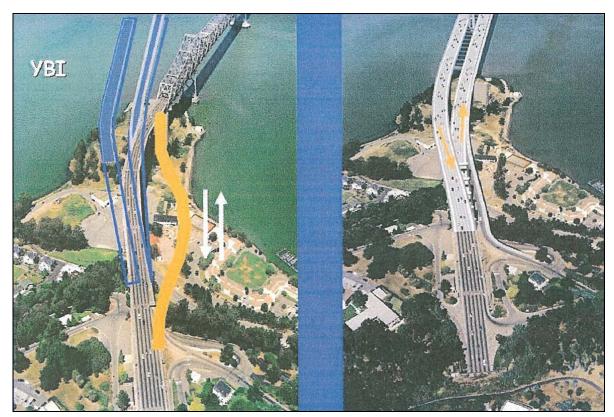
Caltrans is forecasting a \$1.9 million increase in cost for the South/South Detour contract due to an extension of the contract to integrate with the schedule of the re-advertised SAS contract. See Contract Issues below. The impact of this change can be absorbed by available contract contingency.

## **Contract Issues:**

Issue	Mitigating Action
Delay to the SAS contract due to re- advertising and Addendum 5 to the SAS contract has extended the South/South Detour Contract, so as to integrate with the SAS schedule.	CCO #24 included a contract time extension to July 1, 2007 in order to align the schedule for this contract with the schedule requirements on the SAS contract. The SAS completion being extended by six months due to Addendum 5 has resulted in further changes to the South-South Detour contract including additional time extensions or scope changes. Caltrans will be evaluating impact and different options for this Contract to mitigate impact of the impending SAS schedule change.

**Recent TBPOC Actions:** In December 2005 the TBPOC approved CCO #24 which provided a time extension to the contract along with compensation for time related overhead made necessary by changes to the SAS contract schedule. Total cost for this CCO is \$7 million. Total time added to the schedule is 381 days. Note that the Baseline Contract Completion Date shown above already accounts for the impact of this CCO.

## **Contract Photographs**



Temporary Bypass Structure (in yellow)



Construction of Bent 48 grade beams along the former Southaate Road on Yerba Buena Island



Construction of columns for the viaduct portion of the Temporary Bypass Structure (TBS) adjacent to the U.S. Coast Guard Road on Yerba Buena Island

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ OTHER MAJOR CONTRACTS IN DESIGN**

**Contract Description:** Caltrans is currently designing a number of other major construction contracts that will be necessary prior to opening the new east span, including the Oakland Touchdown and the YBI Transition Structure. Following opening of the new bridge, the existing bridge will be removed with the Bridge Demolition contract.

Other Major Contracts Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	238.8	-	238.8	30.6	256.5	17.7
Capital Outlay Construction						-
YBI Transition Structure	299.3	-	299.3	-	318.4	19.1
Oakland Touchdown	283.8	-	283.8	-	272.7	(11.1)
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	-	15.0	-	15.0	-
Total Capital Outlay Construction	837.3	-	837.3	-	828.1	(9.2)
TOTAL	1,076.1	-	1,076.1	30.6	1,084.6	8.5

Note: Details may not sum to totals due to rounding effects.

#### **Other Major Contracts Schedule Summary**

Project	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)	Design % Complete
Stormwater Treatment Measures	March 2008	July 2008	4	100
YBI Transition Structure	November 2013	May 2014	6	80
Oakland Touchdown	November 2013	May 2014	<mark>6</mark>	TBD
Existing Bridge Demolition	September 2014	March 2015	6	10

#### **Contract Status:**

**Stormwater Treatment Measures:** This contract to implement best practices for stormwater runoff treatment will be advertised in early 2006. BATA approved the bid documents for this project for advertisement on October 26, 2005.

Oakland Touchdown: The TBPOC authorized Caltrans to split the Oakland Touchdown project into multiple contracts to accelerate work and to reduce the risk of any of this work impacting the critical path for the project. The first contract would construct all the marine foundation work and west-bound approach work earlier to keep the work off the project's critical path and is forecast to be complete in July 2009. The second contract would construct the remaining east-bound approach when west-bound traffic is shifted onto the new SAS and is forecast to be complete in May 2014. The third contract would replace the existing submarine electrical cable from Oakland to Treasure Island and it is forecast to be completed in July 2007. It will be the first to be

constructed to avoid possible construction conflicts. The fourth contract would incorporate most of the electrical elements from OTD as well as from other segments of the East Span into a single contract and is currently being scoped. Due to the split, the capital outlay forecast for this work has been reduced from \$283.8 million to \$272.7 million, saving \$11.1 million. However, the capital outlay support for the contract was increased to cover the additional work to split the contract and to administer four separate contracts over a longer duration rather than the original single contract. This COS impact is estimated at \$17.7 million, and includes engineering, support and administration costs. Currently, these charges can be funded from contingencies in Other Budgeted Capital. Caltrans recently issued for review 95% Plans, Specifications, Engineer's Estimate (PSE) documents for the Relocation of the Existing Submarine Cable. The contract schedule completion date has been extended by 6 months due to a 6-month delay to the East Bound Open to Traffic date due to the 6-month impact to the SAS contract completion caused by SAS Addendum 5.

YBI Transition Structure: This contract is currently being designed by Caltrans. Caltrans has also initiated a value analysis effort on the project to evaluate the current design. Recent changes in the SAS contract, including the elimination of the completion milestone for the W2 cap beam and the 6-month extension to overall SAS completion, would affect the packaging and phasing options for the YBI Transition Structure contract. As part of an ongoing cost review process, Caltrans is reporting a \$19.1 million increase in the Estimate at Completion amounts for the contract. Most of the cost increase is due to a higher estimate for electrical work and scheduling. Currently, these charges can be funded from contingencies in Other Budgeted Capital. The contract schedule completion date has been extended by 6 months due to a 6-month delay to the East Bound Open to Traffic date due to the 6-month impact to the SAS contract completion caused by SAS Addendum 5.

Bridge Demolition: Design is 10% complete and currently on hold. Caltrans recent budget estimates reduce the budget for the demolition work by \$17.2 million due to a re-evaluation of the cost escalation rates. The contract schedule completion date has been extended by 6 months due to a 6-month delay to the East Bound Open to Traffic date due to the 6-month impact to the SAS contract completion caused by SAS Addendum 5.

Recent TBPOC Actions: None.

#### **Contract Photographs**



Artist's Rendition of Oakland touchdown Aerial View

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## **▶ OTHER COMPLETED CONTRACTS AND RELATED WORK**

**Summary Description:** Substantial work has already been performed on the SFOBB East Span Replacement project to facilitate construction of the mainline construction contracts.

Other Contracts and Related Work Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	227.0	-	227.0	208.9	227.0	-
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.7	72.4	-
Capital Outlay Construction						-
SAS W2 Foundations	26.4	-	26.4	25.7	26.4	-
YBI/SAS Archeology	1.1	-	1.1	1.1	1.1	-
YBI - USCG Road Relocation	3.0	-	3.0	2.8	3.0	-
YBI - Substation and Viaduct	11.6	-	11.6	11.2	11.6	-
Oakland Geofill	8.2	-	8.2	8.2	8.2	-
Pile Installation Demonstration Project	9.2	-	9.2	9.2	9.2	-
Existing East Span Retrofit	30.8	-	30.8	30.8	30.8	
Total Capital Outlay Construction Completed	90.3	-	90.3	89.0	90.3	-
TOTAL	389.7	-	389.7	336.6	389.7	-

Note: Details may not sum to totals due to rounding effects.

Other Contracts and Related Work Schedule Summary

Project	Actual Project Completion Date
Existing East Span Retrofit	March 1998
Interim Retrofit	July 2000
Pile Installation Demolition Project	December 2000
YBI / SAS Archaeology	January 2003
Oakland Geofill	April 2003
YBI – USCG Road Relocation	June 2004
SAS W2 Foundations	October 2004
YBI Substation and Viaduct	May 2005

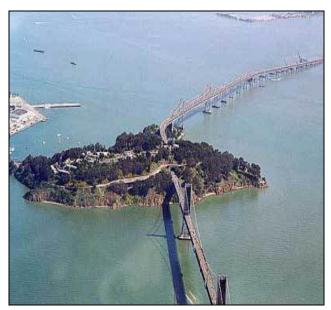
**Summary Status:** Construction has been completed on the above listed contracts. Caltrans continues to work with various environmental agencies to conduct compliance inspections and monitor and mitigate any environmental impacts from the project.

Contract Issues: None.

Recent TBPOC Actions: None.



San Francisco-Oakland Bay Bridge Night View



San Francisco-Oakland Bay Bridge Aerial View



Completed W2 pier columns at the Yerba Buena Island, which will be the western support of the Self-Anchored Suspension (SAS) Structure

# San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project

**Project Description:** The SFOBB West Approach Replacement Project will replace the entire west approach structure from the 5<sup>th</sup> Street to the west anchorage of the existing west spans of the SFOBB while maintaining existing traffic lanes for the weekday commute.

SFOBB West Approach Replacement Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
West Approach						
Capital Outlay Support	120.0	-	120.0	70.1	120.0	-
Capital Outlay Construction	309.0	-	309.0	174.7	309.0	-
TOTAL	429.0	-	429.0	244.8	429.0	-

Note: Details may not sum to totals due to rounding effects.

**SFOBB West Approach Replacement Schedule Summary** 

Project	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
West Approach	August 2009	August 2009	-

**Project Status:** Construction work is 63% complete as of December 20, 2005, which includes mobilization. Seismic retrofitting construction is continuing throughout the project. Major work during the period include CIDH and CISS pile driving operations for the mainline, 5th Street and Harrison off ramps. Falsework for Frame 7U(N), and the preparation and steel work prior to the early Spring 2006 demolition of Frame 8U(N) continued. The 4th Street retrofit work also continues.

Project Issues: None.

Recent TBPOC Actions: None.



4 Sections Frames 7U - 8U



4 Sections Frames 7U - 8U



Interim Eastbound I-80: Stage 6 Detour (ST6D)



West Approach at 4<sup>th</sup> Street looking east.



New Frame 7U north Falsework



New 5th Street off ramp Bents 1 thru 5, CISS Piles



West Approach Project Stages

# Richmond-San Rafael Bridge (RSRB) Seismic Retrofit Project

**Project Description:** The Richmond-San Rafael (RSR) Bridge Seismic Retrofit Project strengthened the existing bridge to withstand the effects of a large seismic event. As part of the retrofit work, Caltrans performed work to strengthen the bridge foundations, replace the existing west trestle, the main channel fenders, and the joint rehabilitation of the bridge deck. (The RM1 work is reported in the RM1 section of the report).

**RSRB Seismic Retrofit Cost Summary (\$Millions)** 

Contract	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
RSRB Seismic Retrofit						
Capital Outlay Support	134.0	-	134.0	122.3	127.0	(7.0)
Capital Outlay Construction	780.0	-	780.0	666.1	698.0	(82.0)
TOTAL	914.0	-	914.0	788.4	825.0	(89.0)

Note: Details may not sum to totals due to rounding effects.

**RSRB Seismic Retrofit Schedule Summary** 

Project	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
RSRB Seismic Retrofit	August 2005	October 2005	2

**Project Status:** Caltrans achieved seismic safety on the bridge in July 2005. Caltrans is expecting at least \$89 million in savings from the AB 144 / SB 66 budget. The construction contract was completed and accepted on October 28, 2005. A Proposed Final Estimate has been submitted to the contractor, who has a deadline of January 6, 2006 to respond. Caltrans is in the process of finalizing project plans and specifications for a public access lot on the Marin side of the bridge to comply with a Bay Conservation and Development Commission (BCDC) permit condition.

Contract Issues: None.

Recent TBPOC Actions: None.

<sup>\*</sup> The seismic retrofit contract included work to rehabilitate the bridge deck joints. Although the deck joint work was funded from RM1 toll funds, the work is also eligible for Toll Bridge Seismic Retrofit Program funding. In July 2005, BATA rescinded \$16.9 million in RM1 funds for the deck joint work to make additional RM1 funds available for the New Benicia-Martinez Bridge Project. An equivalent amount of seismic funds will be used on the deck joint work, which is included in the budget above. This issue is also discussed in the RM1 portion of the report on page 38.

## Other Completed Seismic Retrofit Projects

**Summary Description:** Caltrans has already completed the seismic retrofits of the West Spans of the SFOBB, the existing 1958 Carquinez Bridge, the existing Benicia-Martinez Bridge, the San Mateo-Hayward Bridge, and two former toll bridges in southern California.

Other Completed Seismic Retrofit Projects Cost Summary (\$Millions)

Project	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit Project	307.9	-	307.9	300.9	307.9	-
Carquinez Bridge Retrofit Project	114.2	-	114.2	114.2	114.2	-
Benicia-Martinez Bridge Retrofit Project	177.8	-	177.8	177.8	177.8	-
San Mateo-Hayward Bridge Retrofit Project	163.5	-	163.5	163.4	163.5	-
Vincent Thomas Bridge Retrofit Project	58.5	-	58.5	58.4	58.5	-
San Diego-Coronado Bridge Retrofit Project	103.5	-	103.5	102.6	103.5	-
TOTAL	925.4	-	925.4	917.3	925.4	-

Note: Details may not sum to totals due to rounding effects. Capital Outlay Support and Capital Outlay have been combined.

Other Completed Seismic Retrofit Projects Schedule Summary

The completed colonia item on a region consum cannot					
Project	Actual Project Completion Date				
Vincent Thomas Bridge Retrofit	May 2000				
San Mateo-Hayward Bridge Retrofit	June 2000				
Carquinez Bridge Retrofit	January 2002				
San Diego-Coronado Bridge Retrofit	June 2002				
Benicia-Martinez Bridge Retrofit	August 2002				
SFOBB West Span Seismic Retrofit	June 2004				

**Summary Status:** Construction has been completed on the above listed projects. The Estimate at Completion amounts shown above include allowances for minor project closeout costs.

Contract Issues: None.

Recent TBPOC Actions: None.

## Other Toll Bridges

#### **Dumbarton and Antioch Bridges**

The original design of the Dumbarton and Antioch Bridges were based on design criteria developed after the 1971 San Fernando Earthquake. In the early 1990's, Caltrans determined that these two structures had the seismic resistant features required by the post 1971 codes and were not likely to be vulnerable during a major seismic event. Since that time, Caltrans has pursued an aggressive seismic research program, and based on the results of this program, significantly revised its seismic design practice in the late 1990's. Consistent with recommendations by the Caltrans Seismic Advisory Board, Caltrans regularly reassesses the seismic hazard and performance of its bridges. Due to the tremendous changes in seismic design practice that have occurred since the design of the Dumbarton and Antioch bridges, a comprehensive assessment of the potential need and scope for seismic retrofit based on current knowledge is prudent.

#### **Previous Reports**

A number of limited studies have been made of these bridges in the past. However, none of the studies have fully assessed the seismic performance of the structures under current standards.

#### **Vulnerability Studies**

In late 2004, Caltrans initiated vulnerability studies on the Dumbarton and Antioch bridges. The purpose of these studies was to conclusively determine if the bridges would meet current seismic performance standards. The studies were essentially completed in May 2005. They were not a complete global analysis, but rather an investigation of selected bents modeled as independent structures. The analysis was limited in scope and based on as-built plans and currently available geotechnical information. The superstructure response was not analyzed.

The Dumbarton and Antioch Bridges have many seismic resistant features, and the results of the vulnerability studies indicate that the bridges should perform well in a moderate seismic event. However, during a major seismic event, some potential vulnerabilities (summarized below) become apparent.

- Foundation response generally governs performance. The piles may plunge axially and potentially cause permanent footing rotations.
- Potentially large foundation displacements and rotations may result in deformations that can't be easily repaired.
- ♦ The bent cap, pile cap, pile and superstructure are not capacity protected by the ductile columns and, as a result, these elements may be damaged in a major event, especially if the foundation is retrofitted.

Given the limitations of the studies, there was insufficient evidence to conclusively determine the performance of the bridges during a maximum credible earthquake (MCE). While the Dumbarton and Antioch bridges may meet performance standards, a more comprehensive technical study is necessary to understand the performance of these structures during an MCE event. A study of this level is necessary to accurately determine the structures' response and to develop any necessary retrofit strategies. A comprehensive geotechnical study using the latest analysis techniques is likely necessary in order to perform this level of analysis.

#### **Sensitivity Analysis**

As a follow-up to the Vulnerability Study, a sensitivity analysis is being performed on a single representative bent used in the Vulnerability Study (Bent 23 of the Dumbarton Bridge). The goal of the analysis is to determine the structural response associated with uncertainties in the geotechnical data. An envelope of soil conditions (best-case and worst case scenarios) was used in the analysis. The results of the Sensitivity Analysis will be used to determine the scope and value of conducting further geotechnical studies.

While the Sensitivity Analysis is ongoing, preliminary results indicate that the seismic response of the bridge is largely dependant on the soil conditions and that a comprehensive geotechnical investigation is essential for understanding the bridge's performance during a major seismic event. A work plan is being developed to assess the extent of geotechnical work needed for a complete seismic analysis and to assess the required performance levels for each structure.

#### **Cost and Schedule**

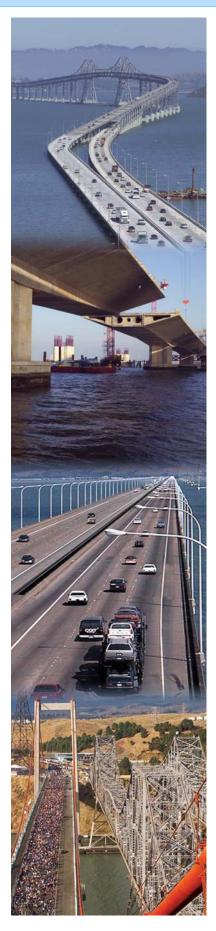
A preliminary cost estimate, schedule, and an initial risk analysis have been developed to complete a comprehensive seismic analysis for each bridge. The preliminary estimate and schedule were developed as a baseline assuming a complete geotechnical and geophysical investigation is required at each bridge.



Antioch Bridge



Dumbarton Bridge



# **PROJECT / CONTRACT REPORTS**

# Regional Measure 1 Program

New Benicia-Martinez Bridge Project Summary

- New Benicia-Martinez Bridge Contract
- Other Contracts and Related Project Activities

New Carquinez Bridge Project

Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Project

Richmond-San Rafael Bridge Trestle Deck Overlay Project Interstate 880 / State Route 92 Interchange Reconstruction Other Completed Regional Measure 1 Projects

- San Mateo-Hayward Bridge Widening Project
- Richmond Parkway Project
- Bayfront Expressway Widening Project

# New Benicia-Martinez Bridge Project Summary

**Project Description:** The new Benicia-Martinez Bridge project constructs a new parallel bridge just east of the existing bridge. The project will include reconstructed interchanges to the north and south of the bridges and a new toll plaza and administration building in Martinez.

New Benicia-Martinez Bridge Project Cost Summary (\$Millions)

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	157.1	21.1	178.2	140.4	178.2	-
Right-of-Way and Others	20.4	(0.1)	20.3	12.0	20.3	-
Capital Outlay Construction						-
New Bridge*	672.0	112.0	784.0	569.7	784.0	-
I-680/I-780 Interchange Replacement*	76.3	16.1	92.4	67.9	92.4	-
I-680/Marina Vista Interchange Reconstruction	51.5	3.4	54.9	51.3	54.9	-
New Toll Plaza	24.3	2.0	26.3	17.6	26.3	-
Other	37.5	9.6	47.1	15.0	47.1	-
Project Reserve	20.8	39.0	59.8	-	59.8	-
TOTAL	1,059.9	203.1	1,263.0	873.9	1,263.0	-

Note: Details may not sum to totals due to rounding effects.

**New Benicia-Martinez Bridge Project Schedule Summary** 

<u> </u>			
Project	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
I-680/Marina Vista Interchange Reconstruction	March 2006	March 2006	-
New Toll Plaza	June 2006	August 2006	2
New Benicia-Martinez Bridge	December 2007	December 2007	-
I-680/I-780 Interchange Replacement	December 2007	February 2008	2
Open to Traffic	December 2007	December 2007	-

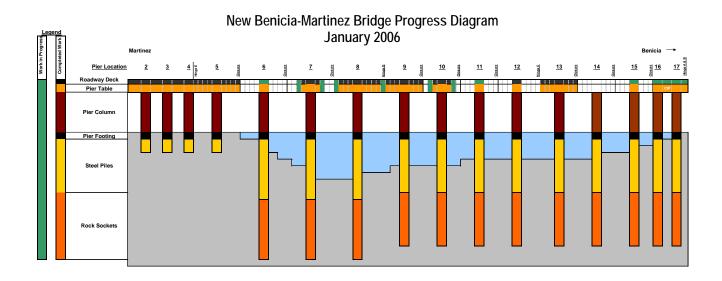
**Project Status:** All major construction projects necessary to open the bridge are currently in construction. Numerous foundation and superstructure issues have significantly delayed the new bridge contract. See the following contract detail pages for more information. Note that the remaining expenditures required on the "Right-of-Way and Others" category represents environmental permitting and mitigation. On December 21, 2005, BATA approved a budget increase resulting in a revised total of \$1.263 billion.

<sup>\*</sup> The budget and estimate at completion includes approximately \$33 million in non-toll bridge funds (Proposition 192 and SHOPP).

## **Project Issues**

# To open the bridge, Caltrans will have to coordinate opening and close-out activities among the different contractors that will be active on the project. These activities including structural bridge and electrical tie-ins have been complicated by the delays to the new bridge. As identified in Caltrans Risk Management Plan, these delays also may further escalate support and material costs on the project. Mitigating Action Based on the Caltrans Risk Management Plan, BATA has budgeted a program contingency to fund these potential increases. Caltrans also is completing a comprehensive schedule of all activities necessary to open the new bridge to traffic. As necessary, Caltrans will be negotiating with their contractors to resolve any final opening and close-out activities to open the bridge.

**Recent TBPOC Actions:** See the following contract detail pages for more information.





Benicia Toll Plaza -Toll Booth Canopy showing the ceiling grid



Marina Vista - looking from 680NB Off ramp - EPS Block Installation

## New Benicia-Martinez Bridge Project

#### ▶ NEW BENICIA-MARTINEZ BRIDGE CONTRACT

**Contract Description:** The new bridge contract constructs a new cast-in-place segmentally constructed reinforced concrete bridge just east of the existing bridge. The new bridge will carry five lanes of eastbound I-680 traffic towards Benicia.

**New Benicia-Martinez Bridge Cost Summary (\$Millions)** 

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
New Benicia-Martinez Bridge						
Capital Outlay Support	84.9	7.3	92.2	68.5	92.2	-
Capital Outlay Construction	672.0	112.0	784.0	569.7	784.0	-
TOTAL	756.9	119.3	876.2	638.2	876.2	-

Note: Details may not sum to totals due to rounding effects.

**New Benicia-Martinez Bridge Schedule Summary** 

Contract	Baseline Contract Completion Date	Forecast Contract Completion Date	Variance (Months)
New Benicia-Martinez Bridge	December 2007	December 2007	-

**Contract Status:** The contract is 83 % complete. The superstructure concrete is in place and post tensioned from the south abutment to pier 4, and barrier rail construction is in progress. Superstructure segments have been cast at piers 5, 9, and most recently 13, while segments are being cast at piers 7, 8, and 10. Travelers from pier 13 will be moved to pier 12, after some refurbishing work in Vallejo. In order to maintain concrete temperature within the specified limits, cooling tubes are being installed in the segments and a nitrogen station is in operation for cooling the concrete in the delivery trucks. 151 of 344 segments are complete as of the end of December 2005, for the above mentioned piers. Ten tower cranes are installed and operational. Pier table construction continues at piers 6, 11 and 15, and column construction is complete at piers 14. For Frame 4 cast on falsework, barrier rails, approach slab work, isolation casing covers, grading for drainage and slope paving are complete, however, approximately 10% of the deck surface are not acceptable. Bridge deck repairs will be needed in large areas around pier 3 due to poor quality of concrete at surface even after grinding. Contractor is still investigating deck repair options (epoxy versus polyester overlay). Grinding on bridge deck was performed from 12 feet north of the end of the structural approach slab to pier 3. However, additional profilographing, skid testing and grinding will be needed at approach slab and north of pier 3. On Frame 1 Cast-on Falsework, the bottom slab in span 16 and the bottom slab of P17 diaphragm are complete. Continued work on forms, rebar and PT in stem walls of Spans 15, 16 and 17, including the Span 16 intermediate diaphragm.

#### **Contract Issues**

#### Issue

Over the next seven months, construction of the first of two mid-span hinges will occur. At the present time, there are no issues presently facing the project associated with hinge construction. However, these hinges represent a unique and complex element of the bridge construction.

There are several areas of concern in the construction of this first hinge. Risk items include: superstructure alignment/geometry control, steel box girder alignment, rebar congestion, and bearing installation.

## Mitigating Action

Over the last several months, meetings with the contractor and Caltrans staff were held to identify potential problem areas, as well as appropriate solutions to these issues should they occur. Also, the pedestal endpoints will be under continuous survey control and measurement to detect any trends in alignment and deflections. These actions will continue throughout the construction of the hinges.

**Recent TBPOC Actions:** In October 2005, the TBPOC approved CCO's #109.4 (Pile Construction Joint Reparation), #110.5 (Pile Anomaly Repair) and #133.1 (Heat of Hydration). In November 2005, the TBPOC approved CCO #117.1 (Steel Escalation). In aggregate, these CCOs added \$70.5 million in cost and extended the contract schedule by 3 months, which was already included in the baseline contract completion date.

#### **Contract Photographs**



Span 17 FalseworkTrellis



Pier Table 6 Work



ClosureDeck between Frames 4 & 5 of New Bridge



Frame 1 of New Bridge

## New Benicia-Martinez Bridge Project Summary

## **▶ OTHER CONTRACTS AND RELATED PROJECT ACTIVITIES**

**Contract Description:** Contracts related to the new Benicia-Martinez Bridge project involve the construction of a new toll plaza south of the new bridge in Contra Costa County with 17 toll booths, including two high-occupancy vehicle (HOV) bypass lanes, and the reconstruction of the I-680/Marina Vista Road and I-680/I-780 interchanges.

Other Contracts and Related Activities Cost Summary (\$Millions)

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	72.2	13.8	86.0	71.9	86.0	-
Right-of-Way and Environmental Mitigation	20.4	(0.1)	20.3	12.0	20.3	-
Capital Outlay Construction						-
I-680/I-780 Interchange Replacement	76.3	16.1	92.4	67.9	92.4	-
I-680/Marina Vista Interchange Reconstruction	51.5	3.4	54.9	51.3	54.9	-
New Toll Plaza	24.3	2.0	26.3	17.6	26.3	-
Others	37.5	9.6	47.1	15.0	47.1	-
Total Capital Outlay Construction	189.6	31.1	220.7	151.8	220.7	-
TOTAL	282.2	44.8	327.0	235.7	327.0	-

Note: Details may not sum to totals due to rounding effects.

Other Contracts and Related Activities Schedule Summary

Project	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
I-680/Marina Vista Interchange Reconstruction	March 2006	March 2006	-
New Toll Plaza	June 2006	August 2006	2
I-680/I-780 Interchange Replacement	December 2007	February 2008	2

#### **Contract Status:**

**Toll Plaza and Administration Building:** The contract is 79 % complete. The Contractor continued to install the Toll Booth canopy roofing and the metal railings for the stairs connecting the tunnel and the tool booths. Work on the installation of steel doors, dampers and heaters at the toll booth began. Installation of the joist beams between the perimeter and the ring beam for the Courtyard Canopy continued. The contract has been operating under liquidated damages since October 11, 2005, which is the current extended contract completion date. A hearing with the Dispute Resolution Board (DRB) will be held late January 2006 to resolve NOPC # 39, Liquidated Damages.

**I-680/I-780 Interchange:** The contract is approximately 83% complete. All footings, bents, and columns for Bridge 215, which is the northbound I-680 connection from pier 17, are complete, and superstructure works are in progress. The Contractor continued to build the trestle for Span 17 falsework, and the Span 20 lost deck. All foundations, bents, and columns for bridges 212 and 214, the westbound I-780 connector, are complete. Superstructure work is in progress for bridge 212, with the Contractor forming decks at span 20 and 21. The completion of final electrical work is delayed until April 2008, based on the completion of the new bridge by December 30, 2007.

I-680/Marina Vista Interchange: The contract is approximately 93% complete. While falsework removals for the Mococo Overhead Bridge and the On Ramp Bridge have been completed, and falsework materials continued to be demobilized from the jobsite. Class 1 finishing of the Retaining Wall # 1 is on-going. The Contractor continued placement of the Expandable Polystyrene (EPS) Block along the CCNB line between Station 97+00 and the Mococo Overhead On-Ramp Bridge, as well as, continued to pull conductor wires for the street and signal lights at Mococo Road, Waterfront Road and the NB/SB Off-Ramp/On-Ramp intersection.

**Wetland Mitigation:** The contract is 98% complete and is scheduled for completion in February 2006. The only remaining work for this contract is the erosion control application, which is scheduled to be done this month.

#### **Contract Issues**

Issue	Mitigating Action		
Lack of progress by the contractor on the Toll Plaza and Administration Building contract.	A Dispute Resolution Board (DRB) hearing will be held in late January 2006 to resolve NOPC #39 concerning liquidated damages.		

**Recent TBPOC Actions:** In October 2005, concerning the I-680/Marina Vista Interchange, the TBPOC approved CCO's #25 (Contaminated Soils), and #31 (Water Treatment). Concerning the I-680/I-780 Interchange, the TBPOC approved CCO's #37.2 (Bent 14 Differing Site Conditions), and 70 (Bent 18 Differing Site Conditions). In aggregate, these CCOs added \$4.3 million in cost.

## New Carquinez Bridge Project

**Project Description:** The new Carquinez Bridge project involves constructing a new suspension bridge west of the existing bridges with four westbound lanes and a bicycle/pedestrian lane and demolishing the existing 1927 bridge.

**New Carquinez Bridge Cost Summary (\$Millions)** 

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	124.4	-	124.4	114.0	125.4	1.0
Capital Outlay Construction						-
Replacement Bridge	253.3	-	253.3	253.0	256.3	3.0
South Interchange Reconstruction	73.9	-	73.9	71.8	73.9	-
Existing 1927 Bridge Demolition	35.2	-	35.2	16.0	35.2	-
Other	29.3	-	29.3	25.2	28.4	(0.9)
Project Reserve	12.1	-	12.1	-	9.0	(3.1)
TOTAL	528.2	-	528.2	480.0	528.2	-

Note: Details may not sum to totals due to rounding effects.

#### **New Carquinez Bridge Schedule Summary**

Contract	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
New Carquinez Bridge	November 2003*	November 2003*	-
1927 Carquinez Bridge Demolition	December 2007	September 2007	(3)
Landscaping	August 2011	August 2011	-

<sup>\*</sup> The date shown is for the opening of the bridge to traffic.

**Project Status:** The Demolition contract is approximately 28% complete based on time and schedule. However, it is approximately 56% complete based on payment, because the big cost items in the contract were works involving the 1958 bridge approach slab replacement, which has been completed. Traffic was switched back onto the 1958 bridge on November 10, 2005. The replacement bridge and all its approaches are complete and opened to traffic. Demolition of the 1927 bridge has started at Units 7 and 3, with the deck and stringer removals. However, work was suspended on December 23, 2005, due to concern with the buckling of eyebars. The Contractor will revise their deck removal procedures prior to resumption of work.

## **Project Issues:**

Issue	Mitigating Action
On the Replacement Carquinez Bridge Contract, the Contractor has submitted claims for various contract issues, including claims on fabrication, labor, and access.	Caltrans is in the process of evaluating the merits of the final claims.  BATA staff will direct BATA's consultant team to also evaluate the claims to determine project risk. Project reserves may need to be used.



1958 Carquinez Bridge Approach New Deck Surface



1958 Carquinez Bridge Approach Seismic Monitoring Pit



New Carquinez Bridge 1



New Carquinez Bridge 2



Sections of the 1927 and 1958 Carquinez Bridge



Carquinez Bridge Demolition-Removal of Deck and Stringers

# Richmond-San Rafael Bridge (RSRB) Trestle, Fender, and Deck Joint Rehabilitation **Project**

Project Description: This contract involves replacing the western trestle section of the bridge near San Rafael, rehabilitating the ship collision fender system at various piers, and rehabilitation of joints on the bridge deck.

RSRB Trestle, Fender, and Deck Joint Rehabilitation Cost Summary (\$Millions)

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	e	f	g = f - d
RSR Trestle, Fender, and Joint Rehabilitation						
Capital Outlay Support	10.8	-	10.8	11.8	12.6	1.8
Capital Outlay Construction	91.3	-	91.3	83.1	84.4	(6.9)
Project Reserve	-	-	-	-	-	-
TOTAL	102.1	-	102.1	94.9	97.0	(5.1)

Note: Details may not sum to totals due to rounding effects.

The Deck Joint Rehabilitation work is funded from RM1 and from Toll Bridge Seismic Retrofit Program (\$16.9 million) funds. In July 2005, BATA rescinded \$16.9 million in RM1 funds from the deck joint project. An equivalent amount of seismic retrofit funding will be used on the project. This action was taken to make additional RM 1 funds available for the Benicia-Martinez Bridge New Span project. The budget for the Richmond-San Rafael Bridge Seismic Retrofit project, shown on page 25 of this report, includes \$16.9 million of costs for the deck joint rehabilitation work.

RSRB Trestle, Fender, and Deck Joint Rehabilitation Schedule Summary

Contract	Baseline Contract Completion Date	Forecast Contract Completion Date	Variance (Months)
Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation	August 2005	August 2005	-

**Project Status:** Work on this project is completed.

Project Issues: None



Repaired Deck Joints-Lower Deck



Richmond-San Rafael Trestle

# Richmond-San Rafael Bridge (RSRB) Deck Overlay Project

**Project Description:** Rehabilitate the existing concrete deck on the bridge, damaged due to traffic and exposure to a marine environment.

## **RSRB Deck Overlay Cost Summary (\$Millions)**

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
RSR Deck Overlay						
Capital Outlay Support	8.0	-	8.0	1.5	8.0	-
Capital Outlay Construction	16.9	-	16.9	-	20.7	3.8
TOTAL	24.9	-	24.9	1.5	28.7	3.8

Note: Details may not sum to totals due to rounding effects.

#### **RSRB Deck Overlay Schedule Summary**

Contract	Baseline Contract Completion Date	Forecast Contract Completion Date	Variance (Months)
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	January 2007	January 2007	-

**Project Status:** This project is Ready to List. Design is complete, and will be advertised upon approval of funding. BAMC staff has completed an independent estimate review of the Caltrans project estimate, and has submitted to BATA for presentation to Caltrans management. The increase in the Capital Outlay Construction estimate is due to a revision of work quantities, escalation in the price of certain concrete materials and a revised allowance for construction difficulty factors.

#### **Project Issues:**

Issue	Mitigating Action
Caltrans has reported a higher than budgeted estimate for the project.	BATA staff has reviewed the revised estimate for the project and has made a recommendation to BATA. Additional funds may be required from the BATA Toll Bridge Rehabilitation Program.



RSR Concrete Deck Overlay

## Interstate 880/State Route 92 Interchange Reconstruction Project

**Project Description:** Modify the existing cloverleaf interchange to increase capacity and improve safety and traffic operations.

Interstate 880/State Route 92 Interchange Cost Summary (\$Millions)

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
а	b	С	d = b + c	е	f	g = f - d
I-880/SR-92 Interchange Improvement						
Capital Outlay Support	28.8	-	28.8	25.8	43.2	14.4
Capital Outlay Construction	94.8	-	94.8	-	119.0	24.2
Capital Outlay Right-of-Way	9.9	-	9.9	7.3	13.0	3.1
Project Reserve	0.3	-	0.3	-	11.1	10.8
TOTAL	133.8	-	133.8	33.1	186.3	52.5

Note: Details may not sum to totals due to rounding effects. \$9.6 million in ACTA funds included under Capital Outlay

Construction. \$3.7 million included in Capital Outlay Construction for separate landscape contract.

Interstate 880/State Route 92 Interchange Schedule Summary

Project	Baseline Project Completion Date	Forecast Project Completion Date	Variance (Months)
I-880/SR-92 Interchange Reconstruction	November 2010	December 2010	1

Project Status: Design is 95% complete. Caltrans continues work on the preparation of the PS&E package with 100% completion re-scheduled from January 10, 2006 to March 1, 2006. Contract package is scheduled to be advertised by August 2006 and start of construction in November 2006. Design work is being delayed further due to resolution of utility conflicts, and design and construction staging refinements. Additional utility easements may be necessary, and it will not be known until Caltrans receives the utility relocation plans from the utility companies. Caltrans continues to be in close contact with the utility companies to resolve the conflicts. Caltrans is pursuing offsite third party wetland mitigation due to 1) limited areas within the project limits that is suitable to accommodate the wetland mitigation ratio of 3:1 required the Water Board and 2) as a means of avoiding future maintenance costs. Additional right of way funds will be required to pay for off-site wetland mitigation. Right-of-way acquisition is in progress. Current right of way parcel count is 70 parcels. Of these, right of way from 50 parcels has been acquired. Caltrans is working with PG&E on the relocation of 6 poles near Lindenwood Way. Undergrounding the utilities at this location is likely. Demolition of 10 of the 12 homes is now scheduled to begin in January 2006. The remaining 2 homes may be sold with proceeds going back into the project. \$1.4 million in federal SAFETEA funds have been earmarked for this project.

## Project Issues:

Issue	Mitigating Action
Later than anticipated approval of the environmental clearance documents has delayed project delivery by 14 months. This delay among other reasons has contributed to an increase in estimated costs due to escalation.	BATA and Caltrans will perform a complete re-evaluation of the schedule impact with the issuance of the 100% PS&E, and will also determine work-around options that would mitigate the delay to the project. BATA will also review the entire project cost with the 100% PS&E.
The forecast schedule includes an aggressive schedule for right-of- way acquisition that provides for 18 months to clear numerous parcels in the project area.	The impact of right-of-way acquisitions on the schedule will be determined during the previously mentioned schedule assessment. Workarounds will be considered if it can prevent possible delay to the construction start. The construction contract will be advertised with an A+B specification, which could reduce the construction duration and recover the project schedule.

## Regional Measure 1 Program

## Other Completed Regional Measure 1 (RM1) Projects

Summary Description: Other completed Regional Measure 1 projects are the following: (a) Widen the San Mateo-Hayward Bridge along its low-trestle section and its eastern approach, (b) Widen the Bayfront Expressway (SR 84) from the Dumbarton Bridge to the U.S. 101/Marsh Road interchange, (c) Construct an eastern approach (Richmond Parkway) between the Richmond-San Rafael Bridge and Interstate 80 near Pinole, and (d) Modify the U.S. 101/University Avenue interchange.

Other Completed RM1 Projects Cost Summary (\$Millions)

Contract	June 2005 BATA Budget	Approved Changes	Current Budget	Cost To Date (11/2005)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
San Mateo-Hayward Bridge Widening Project	217.8	-	217.8	208.5	211.9	(5.9)
Bayfront Expressway Widening Project	35.3	-	35.3	33.0	34.9	(0.4)
Richmond Parkway Project	5.9	-	5.9	3.9	5.9	-
U.S. 101/University Interchange	3.8	-	3.8	3.7	3.8	-
TOTAL	262.8	-	262.8	249.1	256.5	(6.3)

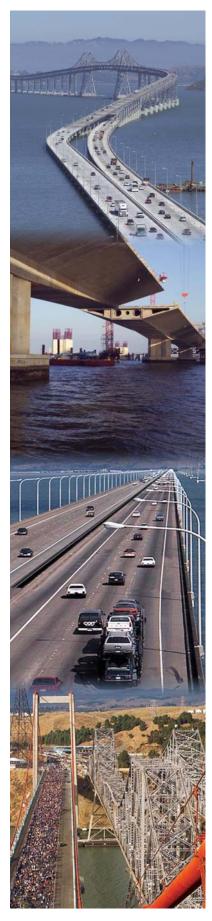
#### **Schedule Summary**

Project	Actual Project Completion Date
Richmond Parkway Project	May 2001
San Mateo-Hayward Bridge Widening Project	February 2003
Bayfront Expressway Widening Project	January 2004
U.S. 101/University Interchange	April 2004

**Project Status:** Construction has been completed on the above listed contracts.

Project Issues: None.

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## **APPENDICES**

- A Toll Bridge Seismic Retrofit Program: San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail
- B Toll Bridge Seismic Retrofit Program Cost Detail
- C Toll Bridge Seismic Retrofit Program Summary Schedule
- D Regional Measure 1 Program Cost Detail
- **E** Regional Measure 1 Program Summary Schedule

# Appendix A: Toll Bridge Seismic Retrofit Program (\$Millions)

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail

Contract	EA Number	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project							
East Span - Skyway	01202X						
Capital Outlay Support		197.0	-	197.0	117.6	197.0	-
Capital Outlay Construction		1,293.0	-	1,293.0	946.0	1,293.0	-
Total		1,490.0	-	1,490.0	1,063.6	1,490.0	-
East Span - SAS Superstructure	0120FX						
Capital Outlay Support		214.6	-	214.6	15.5	214.6	-
Capital Outlay Construction		1,753.7	-	1,753.7	-	1,767.4	13.7
Total		1,968.3	-	1,968.3	15.5	1,982.0	13.7
East Span - SAS E2/T1 Foundations	0120EX						-
Capital Outlay Support		52.5	-	52.5	7.5	52.5	-
Capital Outlay Construction		313.5	-	313.5	65.6	313.5	-
Total		366.0	-	366.0	73.1	366.0	-
SAS W2 Foundations	0120CX						
Capital Outlay Support	0.200%	10.0	_	10.0	9.2	10.0	-
Capital Outlay Construction		26.4	-	26.4	25.7	26.4	-
Total		36.4	-	36.4	34.9	36.4	-
YBI Transition Structures	0120PX						
Capital Outlay Support	UIZUFA	78.7	_	78.7	7.5	78.7	_
Capital Outlay Construction		299.3	_	299.3	-	318.4	19.1
Total		378.0	_	378.0	7.5	397.1	19.1
		070.0		070.0	7.0	007.1	10.1
Oakland Touchdown	01204X	74.4		74.4	40.0	00.4	477
Capital Outlay Support Capital Outlay Construction		74.4 283.8	-	74.4 283.8	19.0 -	92.1 272.7	17.7
-							(11.1)
Total		358.2	-	358.2	19.0	364.8	6.6
YBI South/South Detour	0120RX						
Capital Outlay Support		29.5	-	29.5	13.5	29.5	-
Capital Outlay Construction		131.9	-	131.9	29.3	133.8	1.9
Total		161.4	-	161.4	42.8	163.3	1.9
Existing Bridge Demolition	01209X						
Capital Outlay Support		79.7	-	79.7	0.2	79.7	-
Capital Outlay Construction		239.2	-	239.2	-	222.0	(17.2)
Total		318.9	-	318.9	0.2	301.7	(17.2)
YBI/SAS Archeology	01207X						
Capital Outlay Support	-	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction		1.1	-	1.1	1.1	1.1	-
Total		2.2	-	2.2	2.2	2.2	-

## Appendix A: Toll Bridge Seismic Retrofit Program (\$Millions)

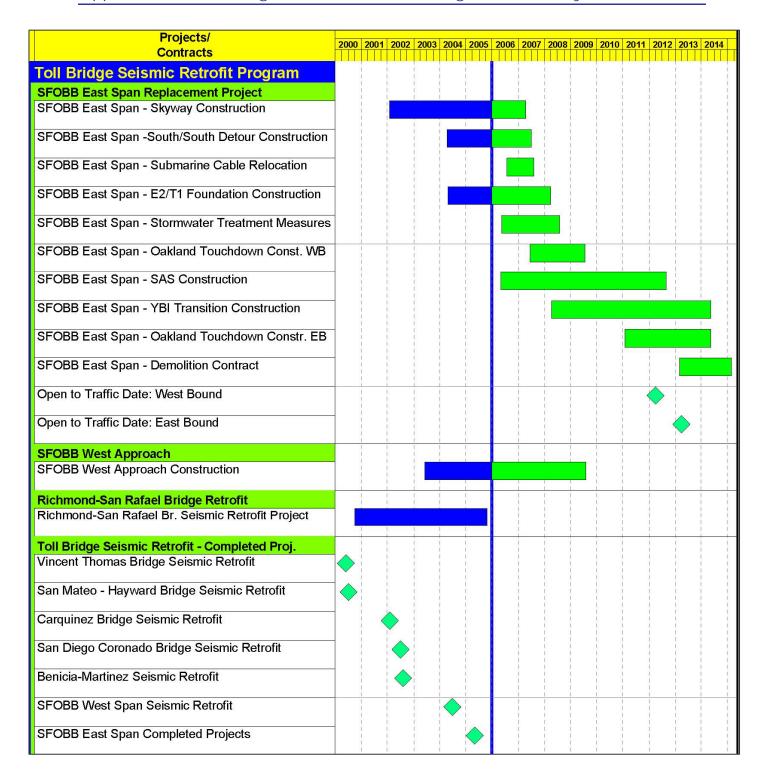
# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail (Cont.)

Contract	EA Number	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
YBI - USCG Road Relocation Capital Outlay Support Capital Outlay Construction Total	0120QX	3.0 3.0 6.0	- -	3.0 3.0 6.0	2.7 2.8 5.5	3.0 3.0 6.0	- - -
YBI - Substation and Viaduct Capital Outlay Support Capital Outlay Construction Total	0120GX	6.5 11.6 18.1	- - -	6.5 11.6 18.1	6.3 11.2 17.5	6.5 11.6 18.1	- - -
Oakland Geofill Capital Outlay Support Capital Outlay Construction Total	01205X	2.5 8.2 10.7	- - -	2.5 8.2 10.7	2.5 8.2 10.7	2.5 8.2 10.7	- - -
Pile Installation Demonstration Project Capital Outlay Support Capital Outlay Construction Total	01208X	1.8 9.2 11.0	- - -	1.8 9.2 11.0	1.8 9.2 11.0	1.8 9.2 11.0	- - -
Stormwater Treatment Measures Capital Outlay Support Capital Outlay Construction Total	0120JX	6.0 15.0 21.0	- - -	6.0 15.0 21.0	3.9 - 3.9	6.0 15.0 21.0	- - -
Right-of-Way and Environmental Mitigation Capital Outlay Support Capital Outlay & Right-of-Way Total	0120X9	- 72.4 72.4	- - -	- 72.4 72.4	- 38.7 38.7	- 72.4 72.4	- - -
Sunk Cost - Existing East Span Retrofit Capital Outlay Support Capital Outlay Construction Total	04343X & (	39.5 30.8 70.3	- - -	39.5 30.8 70.3	39.5 30.8 70.3	39.5 30.8 70.3	- - -
Other Capital Outlay Support Environmental Phase Pre-Split Project Expenditures Non-project Specific Costs Total		97.7 44.9 20.0 162.6	- - -	97.7 44.9 20.0 162.6	97.7 44.9 3.2 145.8	97.7 44.9 20.0 162.6	- - -
Subtotal East Span Capital Outlay Support Subtotal East Span Capital Outlay Construction & Sunk Costs Other Budgeted Capital		959.4 4,492.1 35.1	- - -	959.4 4,492.1 35.1	393.6 1,168.6	977.1 4,498.5 11.0	17.7 6.0 (24.1)
Total SFOBB East Span Replacement Project		5,486.6	-	5,486.6	1,562.2	5,486.6	-

Appendix B: Toll Bridge Seismic Retrofit Program Cost Detail (\$Millions)

Project	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At-Completion Variance
а	С	d	e = c + d	f	g	h = g - e
SFOBB East Span Replacement Project						
Capital Outlay Support	959.4	_	959.4	393.6	977.1	17.7
Capital Outlay Construction	4,492.1	_	4,492.1	1,168.6	4,498.5	6.4
Other Budgeted Capital	35.1	_	35.1	1,100.0	11.0	(24.0)
Total	5,486.6	_	5,486.6	1,562.2	5,486.6	(24.0)
SFOBB West Approach Replacement	3,400.0	_	3,400.0	1,302.2	3,400.0	_
Capital Outlay Support	120.0	_	120.0	70.1	120.0	_
Capital Outlay Construction	309.0	_	309.0	174.7	309.0	_
Total	429.0	_	429.0	244.8	429.0	_
SFOBB West Span Retrofit	423.0		423.0	244.0	423.0	_
Capital Outlay Support	75.0	_	75.0	74.8	75.0	_
Capital Outlay Construction	232.9		232.9	226.1	232.9	_
Total	307.9	_	307.9	300.9	307.9	_
Richmond-San Rafael Bridge Retrofit	307.9	-	307.9	300.9	307.9	-
Capital Outlay Support	134.0		134.0	122.3	127.0	(7.0)
Capital Outlay Support  Capital Outlay Construction	780.0	-	780.0	666.1	698.0	(82.0)
Total	914.0	-	914.0	788.4	825.0	(82.0)
Benicia-Martinez Bridge Retrofit	914.0	-	914.0	700.4	023.0	(69.0)
Capital Outlay Support	38.1	_	38.1	38.1	38.1	-
Capital Outlay Support  Capital Outlay Construction		-				-
Total	139.7 177.8	-	139.7 177.8	139.7 177.8	139.7 177.8	-
Carquinez Bridge Retrofit	177.0	-	177.0	177.0	177.0	-
	20.7		20.7	20.0	20.7	
Capital Outlay Support	28.7	-	28.7 85.5	28.8 85.4	28.7	-
Capital Outlay Construction  Total	85.5 114.2	-			85.5	-
	114.2	-	114.2	114.2	114.2	-
San Mateo-Hayward Bridge Retrofit	20.4		20.4	20.4	00.4	-
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	-	135.4	135.3	135.4	-
Total	163.5	-	163.5	163.4	163.5	-
Vincent Thomas Bridge Retrofit (Los Angeles)						
Capital Outlay Support	16.4	-	16.4	16.3	16.4	-
Capital Outlay Construction	42.1	-	42.1	42.1	42.1	-
Total	58.5	-	58.5	58.4	58.5	-
San Diego-Coronado Bridge Retrofit						
Capital Outlay Support	33.5	-	33.5	33.2	33.5	-
Capital Outlay Construction	70.0	-	70.0	69.4	70.0	-
Total	103.5	-	103.5	102.6	103.5	-
Subtotal East Span Capital Outlay Support	1,433.2	-	1,433.2	805.3	1,443.9	10.7
Subtotal East Span Capital Outlay & Sunk Costs	6,286.7	-	6,286.7	2,707.4	6,211.1	(75.6)
Subtotal Other Budgeted Capital	35.1	-	35.1	-	11.0	(24.0)
Miscellaneous Program Costs	30.0	-	30.0	25.1	30.0	
Subtotal Toll Bridge Seismic Retrofit Program	7,785.0	-	7,785.0	3,537.8	7,696.0	(89.0)
Program Contingency	900.0	-	900.0	-	989.0	89.0
Total Toll Bridge Seismic Retrofit Program	8,685.0	-	8,685.0	3,537.8	8,685.0	-

## Appendix C: Toll Bridge Seismic Retrofit Program Summary Schedule



# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions)

Project	EA Number	June 2005 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At-Completion Variance
а	b	С	d	e = c + d	f	g	h =g - e
New Benicia-Martinez Bridge Project							
New Bridge	00603_						
Capital Outlay Support	00000_	84.9	7.3	92.2	68.5	92.2	_
Capital Outlay Construction		04.0	7.0	52.2	00.0	5Z.Z	_
BATA Funding		661.9	112.0	773.9	555.8	773.9	_
Non-BATA Funding		10.1	112.0	10.1	13.9	10.1	_
Subtotal		672.0	112.0	784.0	569.7	784.0	_
Total		756.9	119.3	876.2	638.2	876.2	_
		700.0	110.0	070.2	000.2	0.0.2	
I-680/I-780 Interchange Reconstruction	00606						
Capital Outlay Support	-						
BATA Funding		24.9	2.0	26.9	25.4	26.9	_
Non-BATA Funding		1.4	5.1	6.5	5.4	6.5	_
Subtotal		26.3	7.1	33.4	30.8	33.4	_
Capital Outlay Construction		20.0		00.1	00.0	00.1	
BATA Funding		54.7	16.1	70.8	54.8	70.8	_
Non-BATA Funding		21.6	-	21.6	13.1	21.6	_
Subtotal		76.3	16.1	92.4	67.9	92.4	_
Total		102.6	23.2	125.8	98.7	125.8	_
		.02.0		0.0	00	.20.0	
I-680/Marina Vista Interchange							
Reconstruction	00605_						
Capital Outlay Support		18.3	1.2	19.5	19.0	19.5	-
Capital Outlay Construction		51.5	3.4	54.9	51.3	54.9	-
Total		69.8	4.6	74.4	70.3	74.4	-
New Toll Plaza and Administration							
Building	00604_						
Capital Outlay Support		11.9	2.4	14.3	13.5	14.3	-
Capital Outlay Construction		24.3	2.0	26.3	17.6	26.3	-
Total		36.2	4.4	40.6	31.1	40.6	-
Other Contracts	See note belo	ow					
Capital Outlay Support		15.7	3.1	18.8	8.6	18.8	_
Capital Outlay Construction		37.5	9.6	47.1	15.0	47.1	_
Capital Outlay Right-of-Way		20.4	(0.1)		12.0	20.3	_
Total		73.6	12.6	86.2	35.6	86.2	-
Cubtatal DATA Carifol Cutton Co.		455 3	40.0	474 7	405.0	474 7	
Subtotal BATA Capital Outlay Support	41	155.7	16.0	171.7	135.0	171.7	-
Subtotal BATA Capital Outlay Construc	tion	829.9	143.1	973.0	694.5	973.0	-
Subtotal Capital Outlay Right-of-Way		20.4	(0.1)		12.0	20.3	-
Subtotal Non-BATA Capital Outlay Supp		1.4	5.1	6.5	5.4	6.5	-
Subtotal Non-BATA Capital Outlay Con	struction	31.7	-	31.7	27.0	31.7	-
Project Reserves		20.8	39.0	59.8	-	59.8	-
Total New Powiets Months Ball 1 - B	-!+	4.050.0	000.4	4 000 0	070.0	4 000 0	
Total New Benicia-Martinez Bridge Pr	oject	1,059.9	203.1	1,263.0	873.9	1,263.0	-

Notes:

Includes EA's 00601\_, 00608\_, 00609\_, 0060A\_, 0060C\_, 0060E\_, 0060F\_, 0060G\_, and 0060H\_ and all Project Right-of-Way

## Appendix D: Regional Measure 1 Program Cost Detail (\$Millions) (Cont.)

Project	EA Number	June 2005 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At-Completion Variance
а	b	С	d	e = c + d	f	g	h =g - e
Carquinez Bridge Replacement Project							
New Bridge	01301_						
Capital Outlay Support	0.00	60.5	_	60.5	59.9	62.3	1.8
Capital Outlay Construction		253.3	_	253.3	253.0	256.3	3.0
Total		313.8	-	313.8	312.9	318.6	4.8
Crockett Interchange Reconstruction	01305_						
Capital Outlay Support	_	32.0	-	32.0	31.9	32.0	-
Capital Outlay Construction		73.9	_	73.9	71.8	73.9	-
Total		105.9	-	105.9	103.7	105.9	-
Existing 1927 Bridge Demolition	01309_						
Capital Outlay Support		16.1	_	16.1	7.8	16.1	_
Capital Outlay Construction		35.2	_	35.2	16.0	35.2	-
Total		51.3	-	51.3	23.8	51.3	-
Other Contracts	See note belo	ow.					
Capital Outlay Support		15.8	_	15.8	14.4	15.0	(0.8)
Capital Outlay Construction		18.8	_	18.8	15.3	17.9	(0.9)
Capital Outlay Right-of-Way		10.5	_	10.5	9.9	10.5	-
Total		45.1	-	45.1	39.6	43.4	(1.7)
Cubicial DATA Conital Outlan Company		404.4		404.4	444.0	405.4	4.0
Subtotal BATA Capital Outlay Support		124.4	-	124.4	114.0	125.4	1.0
Subtotal BATA Capital Outlay Construc	tion	381.2	-	381.2	356.1	383.3	2.1
Subtotal Capital Outlay Right-of-Way		10.5	-	10.5	9.9	10.5	- (2.4)
Project Reserves		12.1	-	12.1	-	9.0	(3.1)
Total Carquinez Bridge Replaceme	nt Project	528.2	-	528.2	480.0	528.2	

Notes:

Other Contracts includes EA's 01302\_, 01303\_, 01304\_, 01306\_, 01307\_, 01308\_, 0130A\_, 0130C\_, 0130D\_, 0130F\_, 0130G\_, 0130H\_, 0130J\_, 00453\_, 00493\_, 04700\_, 00607\_, 2A270\_, and 29920\_ and all Project Right-of-Way

# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions) (Cont.)

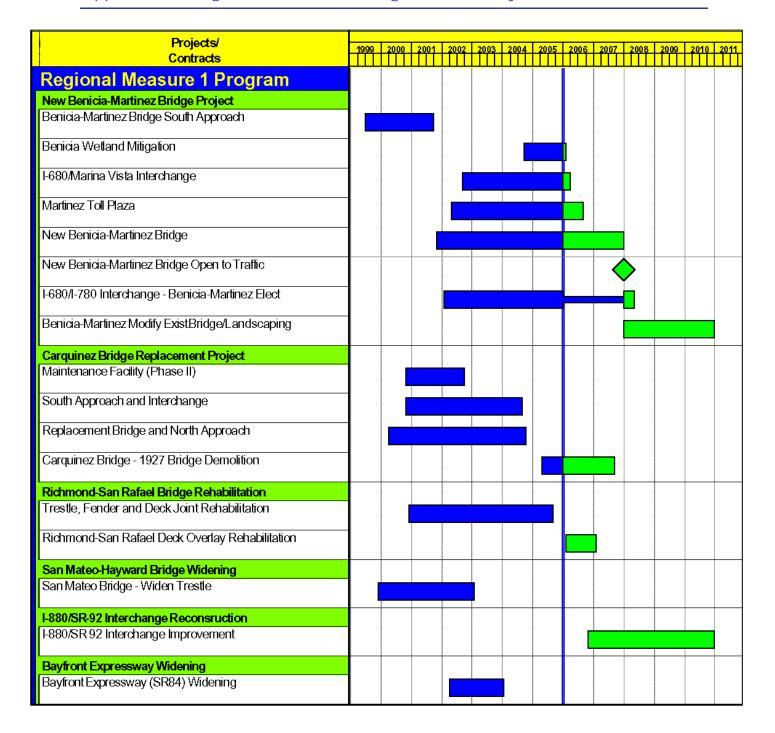
Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Capital Outlay Support Subtotal Capital Outlay Support Subtotal Subtota	Project	EA Number	June 2005 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At-Completion Variance
Pender, and Deck Joint Rehabilitation   Capital Quality Support   C	а	b	С	d	e = c + d	f	g	h =g - e
Pender, and Deck Joint Rehabilitation   Capital Quality Support   C								
Capital Outlay Support   SarTa Funding   2.2   2.2   1.4   1.2   1.8		Soo noto <sup>1</sup> ho	low					
BATA Funding		See note be	iow					
Non-BATA Funding   8.6   - 8.6   10.4   10.4   1.8   Subtool   10.8   - 10.8   1.8   12.6   1.8   Capital Outlay Construction			22	_	22	1 4	2.2	_
Subtotal   10,8   0,8   10,8   11,8   12,6   1,8   13,6   1,8   13,6   1,8   13,6   1,8   13,6	•			_				1.8
BATA Funding	<u> </u>							
BATA Funding   Map							.2.0	
Subtotal   19.3   9.1			40.2	-	40.2	33.4	33.3	(6.9)
Project Reserves			51.1	-	51.1	49.7	51.1	`-
Total   102.1   102	Subtotal		91.3	-	91.3	83.1	84.4	(6.9)
Non-BATA Funding	Project Reserves		-	-	-	-	-	-
Overlay Rehabilitation         0415U           Capital Quitlay Support         4.0         - 4.0         - 5.0         4.0         - 6.0         - 7.0         - 8.0         - 1.0         - 2.0         - 8.0         - 8.0         - 1.0         - 2.0         - 3.0	Total		102.1	-	102.1	94.9	97.0	(5.1)
Overlay Rehabilitation         0415U           Capital Quitlay Support         4.0         - 4.0         - 5.0         4.0         - 6.0         - 7.0         - 8.0         - 1.0         - 2.0         - 8.0         - 8.0         - 1.0         - 2.0         - 3.0	Richmond-San Rafael Bridge Deck							
BATA Funding		0415U						
BBTA Funding	<u> </u>	_						
Non-BATA Funding			4.0	_	4.0	1.5	4.0	_
Subtotal   Subtotal	•			_				_
Capital Outlay Construction   16.9   -   16.9   -   20.7   (0.1)   Total   25.0   -   25.0   25.0   1.5   28.7   3.7   3.7   Total   25.0   -   25.0   25.0   1.5   28.7   3.7   3.7   Total   25.0   25.0   25.0   25.0   3.5   3.7	•			_		1.5		_
Project Reserves   0.1   -   0.1   -   0.1   0.5   0.1   0.5   0.1   0.5   0.1   0.5   0.1   0.5   0.1   0.5				_				3.8
Total         25.0         -         25.0         1.5         28.7         3.7           Richmond Parkway Project (RM 1 Share Only)         Non-Caltrans         Secondary         Secondar				_		-		
Only         Non-Caltrans           Capital Outlay Support         2         5.9         5.9         3.9         5.9         2.5           Total         5.9         2         5.9         3.9         5.9         2.5            5.9         2         5.9         3.9         5.9         2.5            5.9         5.9         3.9         5.9         3.9         5.9            5.9         5.9         5.9         3.9         5.9         2.0            5.9         5.9         5.9         3.9         5.9         2.0            5.0         5.0         6.0         3.0         3.46         2.0         4.0	•			_		1.5	28.7	
Only         Non-Caltrans           Capital Outlay Support         2         5.9         5.9         3.9         5.9         2.5           Total         5.9         2         5.9         3.9         5.9         2.5            5.9         2         5.9         3.9         5.9         2.5            5.9         5.9         3.9         5.9         3.9         5.9            5.9         5.9         5.9         3.9         5.9         2.0            5.9         5.9         5.9         3.9         5.9         2.0            5.0         5.0         6.0         3.0         3.46         2.0         4.0	Richmond Parkway Project (RM 1 Share							
Capital Outlay Support		Non-Caltrans	•					
Capital Outlay Construction   5.9   .	- 3,	Non-Oaitrans		_	_	_	_	_
Total         5.9         5.9         5.9         3.9         5.9         5.9           San Mateo-Hayward Bridge Widening           See note 2 below           Capital Outlay Support         34.6         3         34.6         34.6         34.6         4.0           Capital Outlay Support         180.2         3.0         16.5         0.5         0.6         (0.9)           Project Reserves         1.5         -         1.5         0.5         0.0         (0.9)           Project Reserves         1.5         -         1.5         0.5         20.5         (1.0)           Total         277.8         217.8         20.8         217.8         20.5         (1.0)           Total         278.8         2         28.8         25.8         21.9         (5.9)           Leadial Outlay Support         28.8         2         28.8         25.8         43.2         14.4           Capital Outlay Support         85.2         85.2         8         4.2         4.4           Capital Outlay Support         9.6         9.6         9.8         1.19.0         24.2           Capital Outlay Support         8.6         8.8			5.9	_	5.9	3.9	5.9	_
San Mateo-Hayward Bridge Widening				_				_
Capital Outlay Support			0.0		0.0	0.0	0.0	
Capital Outlay Support	San Mateo-Hayward Bridge Widening	2						
Capital Outlay Construction		See note 2 be						
Capital Outlay Right-of-Way Project Reserves         1.5         -         1.5         -         1.5         -         0.5         0.6         (0.9)           Project Reserves         1.5         -         1.5         -         1.5         -         0.5         21.0         (0.9)           I-880/SR-92 Interchange Reconstruction         EA's 23317_, 01601_, and 01602_         2         28.8         25.8         25.8         43.2         14.4           Capital Outlay Support         28.8         -         28.8         25.8         25.8         43.2         14.4           Capital Outlay Construction         85.2         -         85.2         -         109.4         24.2           Non-BATA Funding         9.6         -         96.6         -         9.6         -         96.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.6         -         9.9         7.3         13.0         3.1         10.8         10.2         10.2				-				-
Project Reserves   1.5   -   1.5   -   217.8   208.5   211.9   (5.9)     Fa80/SR-92 Interchange Reconstruction   EA's 23317_, 01601_, and 01602				-				, ,
Total   EA's 2317, 01601, and 01602   Capital Outlay Support   28.8   28.8   28.8   25.8   25.8   43.2   14.4   22.8   2317   28.8   28.8   28.8   25.8   25.8   28.8				-				
Pa880/SR-92 Interchange Reconstruction   EA's 23317_, 01601_, and 01602				-				, ,
Capital Outlay Support         28.8         -         28.8         25.8         43.2         14.4           Capital Outlay Construction         85.2         -         85.2         -         109.4         24.2           Non-BATA Funding         9.6         -         9.6         -         9.6         -         9.6         -           Subtotal         9.8         -         9.9         9.9         7.3         13.0         3.1           Capital Outlay Right-of-Way         9.9         9.9         7.3         13.0         3.1           Project Reserves         0.3         -         0.3         -         11.1         10.8           Total         133.8         -         133.8         33.1         186.3         52.5           Bayfront Expressway Widening         EA's 00487, 01511, and 01512.         -         -         8.6         8.0         8.2         (0.4)           Capital Outlay Support         8.6         8.6         8.6         8.0         8.2         (0.4)           Capital Outlay Construction         26.5         -         8.6         8.0         8.2         (0.4)           US 101/University Avenue Interchange         Modification         Non-Caltrans	lotai		217.8	-	217.8	208.5	211.9	(5.9)
Capital Outlay Support         28.8         -         28.8         25.8         43.2         14.4           Capital Outlay Construction         85.2         -         85.2         -         109.4         24.2           Non-BATA Funding         9.6         -         9.6         -         9.6         -         9.6         -           Subtotal         9.8         -         9.9         9.9         7.3         13.0         3.1           Capital Outlay Right-of-Way         9.9         9.9         7.3         13.0         3.1           Project Reserves         0.3         -         0.3         -         11.1         10.8           Total         133.8         -         133.8         33.1         186.3         52.5           Bayfront Expressway Widening         EA's 00487, 01511, and 01512.         -         -         8.6         8.0         8.2         (0.4)           Capital Outlay Support         8.6         8.6         8.6         8.0         8.2         (0.4)           Capital Outlay Construction         26.5         -         8.6         8.0         8.2         (0.4)           US 101/University Avenue Interchange         Modification         Non-Caltrans	I-880/SR-92 Interchange Reconstruction	EA's 23317_,	01601_, and 016	02_				
BATA Funding   85.2   - 85.2   - 109.4   24.2     Non-BATA Funding   9.6   -					28.8	25.8	43.2	14.4
Non-BATA Funding	Capital Outlay Construction							
Subtotal   94.8   - 94.8   - 119.0   24.2	BATA Funding		85.2	-	85.2	-	109.4	24.2
Capital Outlay Right-of-Way Project Reserves         9.9         -         9.9         7.3         13.0         3.1           Project Reserves         0.3         -         0.3         -         0.3         -         11.1         10.8           Bayfront Expressway Widening         EA's 00487_, 01511_, and 01512_         Capital Outlay Support         8.6         -         8.6         8.0         8.2         (0.4)           Capital Outlay Construction         26.5         -         26.5         24.8         26.5         -         Project Reserves         0.2         -         0.2         0	Non-BATA Funding		9.6	-	9.6	-	9.6	-
Project Reserves   1338   - 1338   - 1338   33.1   186.3   52.5	Subtotal		94.8	-	94.8	-	119.0	24.2
Total         133.8         - 133.8         33.1         186.3         52.5           Bayfront Expressway Widening         EA's 00487_, 01511_, and 01512	Capital Outlay Right-of-Way		9.9	-	9.9	7.3	13.0	3.1
Bayfront Expressway Widening   EA's 00487_, 01511_, and 01512_				-	0.3			
Capital Outlay Support         8.6         -         8.6         8.0         8.2         (0.4)           Capital Outlay Construction         26.5         -         26.5         24.8         26.5         -           Project Reserves         0.2         -         0.2         0.2         0.2         0.2         -           Total         35.3         -         35.3         33.0         34.9         (0.4)           US 101/University Avenue Interchange           Modification         Non-Caltrans         Substal Outlay Support         -	Total		133.8	-	133.8	33.1	186.3	52.5
Capital Outlay Support         8.6         -         8.6         8.0         8.2         (0.4)           Capital Outlay Construction         26.5         -         26.5         24.8         26.5         -           Project Reserves         0.2         -         0.2         0.2         0.2         0.2         0.2         0.2         -           Total         35.3         -         35.3         33.0         34.9         (0.4)           US 101/University Avenue Interchange           Modification         Non-Caltrans         Subtotal Support         -	Bayfront Expressway Widening	EA's 00487 ,	01511 , and 015	12				
Capital Outlay Construction         26.5         -         26.5         24.8         26.5         -           Project Reserves         0.2         -         0.2         0.2         0.2         -           Total         35.3         -         35.3         33.0         34.9         (0.4)           US 101/University Avenue Interchange           Modification         Non-Caltrans         Substal Outlay Support         -		,			8.6	8.0	8.2	(0.4)
Project Reserves         0.2         -         0.2         0.2         0.2         0.2         -         Total         35.3         33.0         34.9         (0.4)           US 101/University Avenue Interchange           Modification         Non-Caltrans           Capital Outlay Support         - <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>, ,</td>				-				, ,
Modification   Non-Caltrans   Support   Subtotal BATA Capital Outlay Support   358.3   16.0   374.3   319.7   389.3   15.0   Subtotal BATA Capital Outlay Construction   1,569.8   143.1   1,712.9   1,290.4   1,732.1   19.2   Subtotal Capital Outlay Support   42.3   (0.1)   42.2   29.7   44.4   2.2   Subtotal Non-BATA Capital Outlay Support   14.0   5.1   19.1   15.8   20.9   1.8   Subtotal Non-BATA Capital Outlay Support   14.0   5.1   19.1   15.8   20.9   1.8   Subtotal Non-BATA Capital Outlay Support   14.0   5.1   19.1   15.8   20.9   1.8   Subtotal Non-BATA Capital Outlay Support   14.0   5.1   19.1   15.8   20.9   1.8   Subtotal Non-BATA Capital Outlay Support   14.0   5.1   19.1   15.8   20.9   1.8   3.8   3.7				-	0.2	0.2	0.2	-
Modification   Non-Caltrans   Capital Outlay Support   Capital Outlay Construction   Subtotal BATA Capital Outlay Support   358.3   16.0   374.3   319.7   389.3   15.0   Subtotal BATA Capital Outlay Construction   1,569.8   143.1   1,712.9   1,290.4   1,732.1   19.2   1,290.4   1,732.1   19.2   1,290.4   1,732.1   19.2   1,290.4   1,732.1   1	Total		35.3	-	35.3	33.0	34.9	(0.4)
Non-Caltrans	US 101/University Avenue Interchange							
Capital Outlay Support         -		Non-Caltrans	i					
Capital Outlay Construction         3.8         -         3.8         3.7         3.8         -           Total         3.8         -         3.8         3.7         3.8         -           Subtotal BATA Capital Outlay Support         358.3         16.0         374.3         319.7         389.3         15.0           Subtotal BATA Capital Outlay Construction         1,569.8         143.1         1,712.9         1,290.4         1,732.1         19.2           Subtotal Capital Outlay Right-of-Way         42.3         (0.1)         42.2         29.7         44.4         2.2           Subtotal Non-BATA Capital Outlay Support         14.0         5.1         19.1         15.8         20.9         1.8           Subtotal Non-BATA Capital Outlay Construction         92.4         -         92.4         76.7         92.4         -           Project Reserves         35.0         39.0         74.0         0.2         80.6         6.6				-	-	-	-	-
Total         3.8         -         3.8         3.7         3.8         -           Subtotal BATA Capital Outlay Support         358.3         16.0         374.3         319.7         389.3         15.0           Subtotal BATA Capital Outlay Construction         1,569.8         143.1         1,712.9         1,290.4         1,732.1         19.2           Subtotal Capital Outlay Right-of-Way         42.3         (0.1)         42.2         29.7         44.4         2.2           Subtotal Non-BATA Capital Outlay Support         14.0         5.1         19.1         15.8         20.9         1.8           Subtotal Non-BATA Capital Outlay Construction         92.4         -         92.4         76.7         92.4         -           Project Reserves         35.0         39.0         74.0         0.2         80.6         6.6			3.8	-	3.8	3.7	3.8	-
Subtotal BATA Capital Outlay Construction         1,569.8         143.1         1,712.9         1,290.4         1,732.1         19.2           Subtotal Capital Outlay Right-of-Way         42.3         (0.1)         42.2         29.7         44.4         2.2           Subtotal Non-BATA Capital Outlay Support         14.0         5.1         19.1         15.8         20.9         1.8           Subtotal Non-BATA Capital Outlay Construction         92.4         -         92.4         76.7         92.4         -           Project Reserves         35.0         39.0         74.0         0.2         80.6         6.6				-				-
Subtotal BATA Capital Outlay Construction         1,569.8         143.1         1,712.9         1,290.4         1,732.1         19.2           Subtotal Capital Outlay Right-of-Way         42.3         (0.1)         42.2         29.7         44.4         2.2           Subtotal Non-BATA Capital Outlay Support         14.0         5.1         19.1         15.8         20.9         1.8           Subtotal Non-BATA Capital Outlay Construction         92.4         -         92.4         76.7         92.4         -           Project Reserves         35.0         39.0         74.0         0.2         80.6         6.6								
Subtotal Capital Outlay Right-of-Way       42.3       (0.1)       42.2       29.7       44.4       2.2         Subtotal Non-BATA Capital Outlay Support       14.0       5.1       19.1       15.8       20.9       1.8         Subtotal Non-BATA Capital Outlay Construction       92.4       -       92.4       76.7       92.4       -         Project Reserves       35.0       39.0       74.0       0.2       80.6       6.6								
Subtotal Non-BATA Capital Outlay Support       14.0       5.1       19.1       15.8       20.9       1.8         Subtotal Non-BATA Capital Outlay Construction       92.4       -       92.4       76.7       92.4       -         Project Reserves       35.0       39.0       74.0       0.2       80.6       6.6		tion	,					
Subtotal Non-BATA Capital Outlay Construction         92.4         -         92.4         76.7         92.4         -           Project Reserves         35.0         39.0         74.0         0.2         80.6         6.6								
<b>Project Reserves</b> 35.0 39.0 74.0 0.2 80.6 6.6				5.1				1.8
·	• • •	struction		-				-
10tal NW1 F10graff 2,111.8 203.1 2,314.9 1,732.3 2,359.7 44.8								
	i otal Nivi Fiografii		2,111.0	203.1	2,314.9	1,732.5	2,339.1	44.0

Notes:

<sup>&</sup>lt;sup>1</sup> Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRA Expenses for EA 0438U\_ and 04157\_

<sup>&</sup>lt;sup>2</sup> San Mateo-Hayward Bridge Widening Includes EA's 00305\_, 04501\_, 04502\_, 04503\_, 04504\_, 04505\_, 04506\_, 04507\_, 04508\_, 04509\_, 27740\_, 27790\_, 04860\_

## Appendix E: Regional Measure 1 Program Summary Schedule



## Appendix F: Glossary of Terms

**AB144/SB 66 BUDGET:** the planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

**APPROVED CHANGES:** changes to the AB144/SB 66 Budget or June 2005 BATA Budget as approved by the Bay Area Toll Authority Commission.

**AT COMPLETION VARIANCE or VARIANCE (cost):** the mathematical difference between the Estimate at Completion and the Current Budget.

**COST TO DATE:** the actual expenditures incurred by the program, project, or contract as of the month and year shown.

**CURRENT BUDGET:** the sum of the AB144/SB66 Budget or June 2005 BATA Budget and Approved Changes.

**ESTIMATE AT COMPLETION**: the current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**JUNE 2005 BATA BUDGET:** the planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

PROJECT COMPLETE AB144/SB 66 BASELINE or BASELINE PROJECT (or CONTRACT) COMPLETION DATE: the planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

**PROJECT COMPLETE BASELINE**: the planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

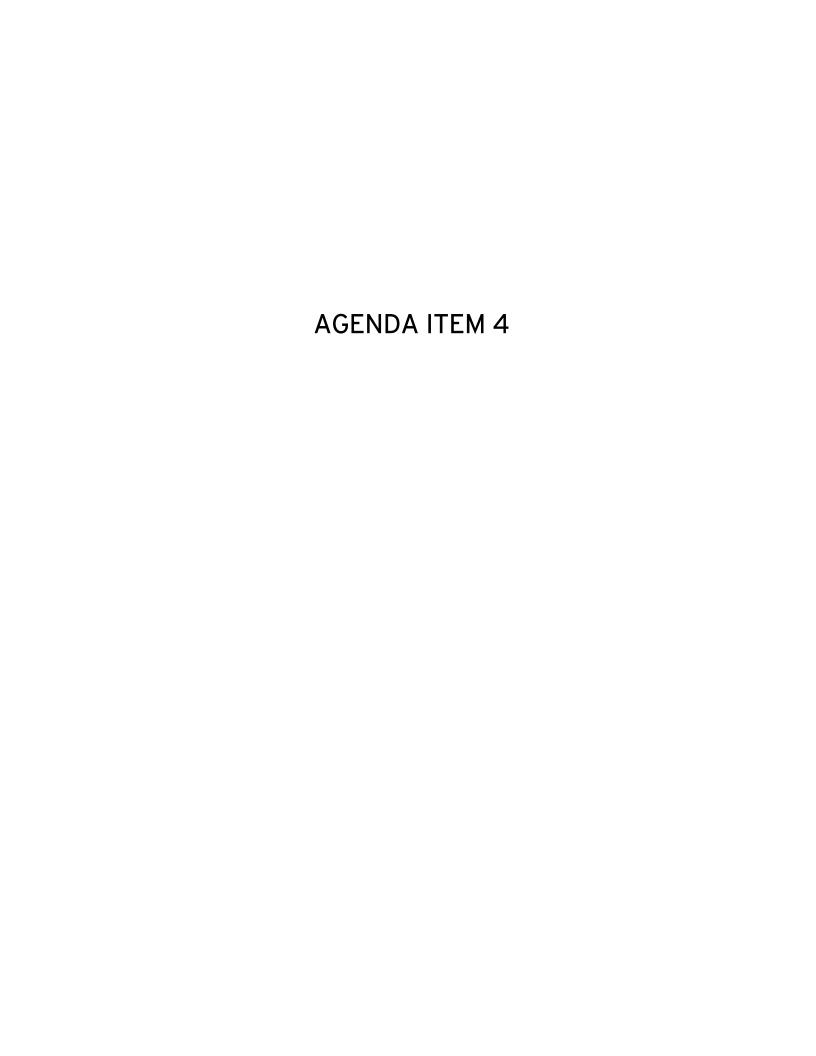
**PROJECT COMPLETE FORECAST or FORECAST PROJECT (or CONTRACT) COMPLETION DATE:** the current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** the mathematical difference expressed in months between the Forecast Completion Date and the Baseline Completion Date.

The following information is provided in accordance with California Government code Section 7550:

This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production, is \$1,574,873.

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Joseph P. Bort MetroCenter 101 Eighth Street Oakland, CA 94607-4700 TEL 510.817.5700 TDD/TTY 510.817.5769 FAX 510.817.7848 E-MAIL info@mtc.ca.gov WEB www.mtc.ca.gov

DATE: January 19, 2006

# Memorandum

TO: Toll Bridge Oversight Committee

FR: Andrew Fremier

RE: 4<sup>th</sup> Quarter 2005 Report

Clipped to the Meeting Materials Binder, for your information, is a Draft Fourth Quarter Report Ending December 31, 2005



# Toll Bridge Seismic Retrofit Program Report

Fourth Quarter Report

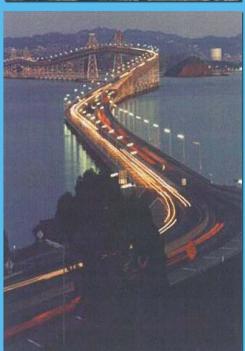
Ending December 31, 2005

Submitted by
Toll Bridge Program
Oversight Committee

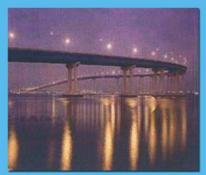


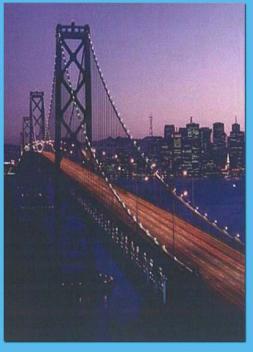












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# **Executive Summary**

The Toll Bridge Program Oversight Committee (TBPOC) submits the 2005 Fourth Quarter Report ending December 31, 2005, for the Toll Bridge Seismic Retrofit Program (TBSRP) in accordance with SB 66 and AB 144. This report provides the following:

- 1. Information on the progress of each project in the program.
- 2. Baseline budget for Capital Outlay (CO) and Capital Outlay Support (COS).
- 3. Current projected costs for CO and COS.
- 4. Expenditures to date.
- 5. Comparison of the baseline schedule to the December 2005 projected schedule.
- 6. Summary of the milestones achieved during the quarter.
- 7. Major risk assessment for the remaining projects.

# Major Milestones and Program Activities During the 4<sup>th</sup> Quarter

Significant progress on the completion of the seismic retrofit projects continued during this past quarter. Appendix E includes a gallery of photos of construction activities on the bridge projects. Only one of the seven Toll Bridges in the TBSRP remains to be retrofitted. The major milestones achieved during the quarter include:

All construction work on the Richmond-San Rafael Bridge seismic retrofit project was completed in October 2005. Caltrans is currently in discussions with regulatory agencies concerning mitigation measures for negative impacts on fish in the project area. It is currently estimated that the project will have a savings of approximately \$89 million from the baseline budget contained in AB 144 and SB 66.

Caltrans is also finalizing project plans and specifications for a public access lot on the

Marin side of the bridge to comply with a Bay Conservation and Development Commission (BCDC) permit condition.

- The San Francisco-Oakland Bay Bridge (SFOBB) West Approach Project has advanced to approximately 63 percent complete and is on schedule for completion in August 2009.
- The SFOBB East Span Seismic Replacement Project Skyway contract is 84 percent complete and is projected to be completed in 2007.
- In November 2005, the TBPOC approved CCO #29 to the SFOBB East Span Seismic Replacement Project Self-Anchored Suspension (SAS) Marine Foundation E2/T1 contract. This change order, concerning the restart of work on this contract, has been signed by the contractor.
- Caltrans has issued a total of 6 addenda for the SFOBB East Span Seismic Replacement Project SAS contract. Addendum #5, issued in December 2005, extended the SAS schedule by 6 months in response to bidder inquiries and to attract more bidders and reduce the bid costs. Bids for the contract are due in February 2006.
- Design work continues on various contracts.
   The SFOBB East Span Seismic Replacement
   Project Oakland Touchdown contract has been split into multiple contracts to accelerate the work. Also, the SFOBB East Span Seismic Replacement Project YBI Transition Structure contract was subject to a value analysis study.
- In September 2005, BATA approved a finance plan. In December 2005, BATA approved the issuance of up to \$1.0 billion in toll bridge revenue bonds. The bond issuance will provide adequate cashflow to fund the SAS contract bid due in February 2006.

AB 144 also requires Caltrans to develop and implement an expanded comprehensive risk management plan for the TBSRP to augment the

established risk management protocols and mitigation measures already in place. An update on these risk management activities is included in this report in Appendix C.



T1 Template as seen from Yerba Buena Island.

# **Program Overview**

Seven of the nine state-owned toll bridges were identified for seismic retrofit in the TBSRP:

- 1. Benicia-Martinez Bridge
- 2. Carquinez Bridge
- 3. San Mateo-Hayward Bridge
- 4. Vincent Thomas Bridge
- 5. San Diego-Coronado Bridge
- 6. Richmond-San Rafael Bridge
- 7. San Francisco-Oakland Bay Bridge (SFOBB) (West Span, West Approach, and construction of the new East Span).

Seismic retrofit of these complex structures presents an extremely difficult engineering challenge and nowhere in the world has a bridge seismic safety program of this size been undertaken. Although the Dumbarton and the Antioch bridges were not included in the program, Caltrans is continuing work on seismic vulnerability studies to assess potential for necessary retrofit work on these structures. See discussion on page 25.

As shown in *Table 1 - TBSRP Project Status*, a significant portion of the TBSRP is complete. Currently, it is anticipated that there will be a cost savings of approximately \$89 million from the project cost included in the AB 144/SB 66 baseline budget on the recently completed Richmond-San Rafael Bridge.

The SFOBB West Approach and new East Span Seismic Replacement projects are currently under construction. The 4<sup>th</sup> Quarter forecast for those projects indicates that they will be completed within the AB 144/SB 66 baseline cost and schedule estimates.

*Tables 2 and 3* provide a summary of the cost, schedule, and status of all the TBSRP projects.

**Table 1 - TBSRP Project Status** 

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Construction
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
Eastbound Carquinez Bridge Seismic Retrofit	Complete
Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

# Risk Management

Caltrans has prepared and is implementing risk management plans (RMP) for all remaining TBSRP projects.

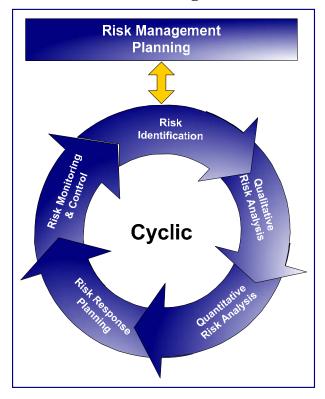
Caltrans' RMPs provide for a systemic process of identifying, analyzing, and responding to project risk. Implementation of the RMPs provides for maximizing the probability and consequences of positive events and minimizing the probability and consequences of adverse events to project objectives (e.g., cost, schedule and quality).

Each element of the RMP is explained below and shown in *Figure 1 - Risk Management Planning*:

- 1. Risk Management Planning deciding how to approach, plan and execute the risk management activities for the project.
- 2. Risk Identification determining which risks might affect the project and documenting their characteristics.
- 3. Qualitative Risk Analysis prioritizing risks for subsequent further analysis or action by assessing and combining their probability and impacts.
- 4. Quantitative Risk Analysis analyzing numerically the effect of identified risks on overall project objectives.
- 5. Risk Response Planning developing options and actions to enhance opportunities and to reduce impact to project objectives.
- 6. Risk Monitoring and Control tracking identified risks, monitoring residual risks, identifying new risks, executing risk response plans, and evaluating their effectiveness throughout the project life cycle.

Although the risk management processes above are presented as discreet elements with well-defined interfaces, in practice they often overlap and interact with each other. This report identifies potential risk items ("Major Risk Issues") for each of the TBSRP projects and proposed actions to mitigate the risks. Appendix C includes the risk assessment and risk management plan for the SFOBB East Span Seismic Replacement project.

Figure 1 – Risk Management Planning



Also, Caltrans and BATA have embarked on an initiative to manage risk jointly on the SFOBB East Span Seismic Replacement Project. The objective is to share program and project risk information to provide reliable risk assessments and risk reports to the TBPOC in support of its decision-making processes. Further information on this initiative is shown in Appendix C.

Table 2-Toll Bridge Seismic Retrofit Program—Cost Summary (\$Millions)

Project	Work Status	AB 144 / SB 66 Budget	Approved Changes	Current Budget	Actual Cost To Date (11/2005)	Estimate at Completion	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	i
SFOBB East Span Replacement Project Capital Outlay Support		959.4	-	959.4	393.6	977.1	17.7	•
Capital Outlay Construction								
Skyway	Construction	1,293.0	-	1,293.0	946.0	1,293.0	-	•
SAS Superstructure	Advertise	1,753.7	-	1,753.7	-	1,767.4	13.7	•
SAS E2/T1 Foundations	Construction	313.5	-	313.5	65.6	313.5	-	•
YBI Transition Structures	Design	299.3	-	299.3	-	318.4	19.1	•
Oakland Touchdown	Design	283.8	-	283.8	-	272.7	(11.1)	•
South/South Detour	Design/	131.9	-	131.9	29.3	133.8	1.9	•
Existing Bridge Demolition	Const Design	239.2	-	239.2	-	222.0	(17.2)	•
Stormwater Treatment Measures	Design	15.0		15.0		15.0	<u>-</u>	•
East Span Completed Projects		90.3		90.3	89.0	90.3		
Right-of-Way and Environmental Mitigation		72.4	-	72.4	38.7	72.4	-	•
Other Budgeted Capital		35.1		35.1		11.0	(24.1)	-
Total SFOBB East Span Replacement Project		5,486.6		5,486.6	1,562.2	5,486.6		
SFOBB West Approach Replacement	Construction							
Capital Outlay Support		120.0	-	120.0	70.1	120.0	-	
Capital Outlay Construction		309.0	-	309.0	174.7	309.0	-	
Total SFOBB West Approach Replacement		429.0	-	429.0	244.8	429.0	-	
Richmond-San Rafael Bridge Retrofit	Construction							•
Capital Outlay Support		134.0	-	134.0	122.3	127.0	(7.0)	
Capital Outlay Construction		780.0	-	780.0	666.1	698.0	(82.0)	
Total Richmond-San Rafael Bridge Retrofit		914.0	-	914.0	788.4	825.0	(89.0)	
Program Completed Projects	Complete							
Capital Outlay Support		219.8	-	219.8	219.3	219.8	-	
Capital Outlay Construction		705.6	-	705.6	698.0	705.6	-	
Total Program Completed Projects		925.4	-	925.4	917.3	925.4	-	
Miscellaneous Program Costs		30.0	-	30.0	25.1	30.0	-	
Program Contingency		900.0	-	900.0	-	989.0	89.0	
Total Toll Bridge Seismic Retrofit Program		8,685.0	-	8,685.0	3,537.8	8,685.0	-	

Within Approved Schedule and Budget

Potential Cost and Schedule Impacts: Possible future need for Program Contingency Allocation Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming Note: Details may not sum to totals due to rounding effects.

# Table 3-Toll Bridge Seismic Retrofit Program—Schedule Summary

Project	Project Complete AB 144 / SB 66 Baseline	Project Complete Forecast	Schedule Variance (Months)	Schedule Status	Remarks
a	b	С	d = c – b	е	f
SFOBB East Span Replacement Project					
Skyway	Apr 07	Apr 07	-		Fabrication issues concerning the Skyway hinge pipe beams could impact project schedule and budget.
SAS E2/T1 Foundations	Jun 08	Mar 08	(3)	•	The suspension of work on this contract has been lifted. The TBPOC has approved the Contract Change Order (CCO) that restarts the work.
SAS Superstructure	Mar 12	Sep 12	6	•	This contract is being re-advertised. Addendum #5 to the SAS Contract, issued by Caltrans on 12/21/05, extends the completion schedule for the SAS by 6 months.
YBI Transition Structures	Nov 13	Nov 13	-		Schedule is being assessed.
Oakland Touchdown (OTD)	Nov 13	Nov 13	-		Schedule is being assessed.
OTD Submarine Cable	n/a	Jul 07	_ <u>-</u>	•	
OTD Westbound	n/a	Jul 09	-	•	
OTD Eastbound	n/a	Nov 13			Schedule is being assessed.
YBI South/South Detour	Jul 07	Jul 07	-		Schedule is being assessed.
Existing Bridge Demolition	Sep 14	Sep 14			Schedule is being assessed.
Stormwater Treatment Measures	Mar 08	Jul 08	4	•	
Open to Traffic Date: West Bound	Sep 11	Mar 12	6	•	
Open to Traffic Date: East Bound	Sep 12	Mar 13	6	•	
SFOBB West Approach Replacement	Aug 09	Aug 09	-	•	
Richmond-San Rafael Bridge Retrofit	Aug 05	Oct 05	2	•	Seismic retrofit completed July 29, 2005. Formal acceptance of this contract on October 28, 2005.

# **Program Costs Baseline and Projected Budget**

The 2005 AB 144/SB 66 baseline budget is \$7.785 billion for Capital Outlay (CO) and Capital Outlay Support (COS) plus \$900 million for the program contingency, for a total baseline budget of \$8.685 billion. The 4<sup>th</sup> Quarter forecast for the program is within the \$8.685 billion budget. As highlighted

above, an approximate \$89 million cost savings is projected for the Richmond-San Rafael Bridge project. As shown in *Table 4 - Toll Bridge Seismic Retrofit Program Baseline (AB 144 / SB 66) And Forecasts* below, the 4<sup>th</sup> Quarter forecast shifts the projected cost savings from the Richmond-San Rafael project into the available program contingency funds, resulting in an increase in program contingency to \$989 million.

Additional cost estimate and expenditure detail for the TBSRP is included in Appendices A1 and A-2. The details of the cost estimates and expenditures for the SFOBB East Span are shown in Appendix B.

Table 4 -Toll Bridge Seismic Retrofit Program Baseline (AB 144 / SB 66) And Forecasts (\$ million)

Contracts	AB 144 / SB 66 Baseline Budget	3 <sup>rd</sup> Quarter 2005 Forecast	Difference from Baseline
Completed Projects			
Benicia-Martinez	177.83	177.83	-
Carquinez	114.13	114.13	-
San Mateo-Hayward	163.51	163.51	-
Vincent Thomas	58.51	58.51	-
San Diego-Coronado	103.52	103.52	-
SFOBB West Span	307.90	307.90	-
Ongoing Projects			-
Richmond-San Rafael	914.00	825.00	(89.00)
SFOBB West Approach	429.00	429.00	-
SFOBB East Span	5,486.60	5,486.60	-
Subtotal	7,755.00	7,666.00	(89.00)
Miscellaneous Program Cost (Indirect Expense)	30.00	30.00	-
Program Contingency	900.00	989.00	89.00
Total Program	8,685.00	8,685.00	-

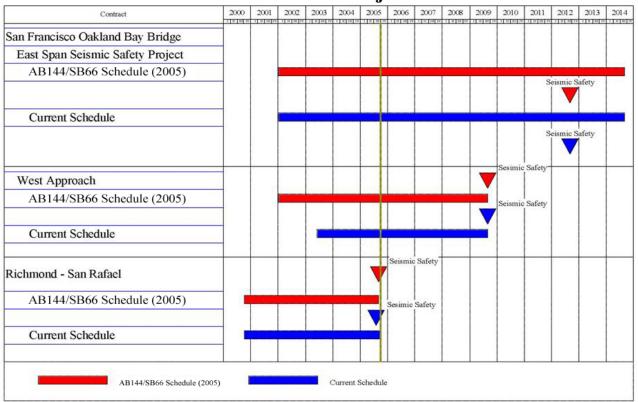
# **Program Schedule**

## **Baseline and Projected Schedule**

The seismic retrofit on six of the seven toll bridges in the TBSRP is complete. These structures include the Benicia-Martinez, Carquinez, Richmond-San Rafael, San Mateo-Hayward, Vincent Thomas, and San Diego-Coronado bridges. Seismic retrofitting of the SFOBB West Span was completed in June 2004; the Richmond-San Rafael Bridge seismic retrofit work was completed on July 29, 2005, with the project being entirely completed in October 2005. The SFOBB West Approach and East Span Seismic Replacement projects are currently under construction. The December 2005 schedule calls for achieving seismic safety and opening to traffic the SFOBB new East Span in 2013. The opening date for the project has been extended by six months

due to the approval in December 2005 of Addendum #5 to the SFOBB East Span Seismic Replacement Project SAS contract. This addendum to extend the completion date of the SAS contract by six months was issued to respond to bidder inquiries and to attract more bidders which would reduce project costs. It is estimated that all of the construction activities for the SFOBB East Span Seismic Replacement project will be completed by 2014, marked by the planned demolition of the existing SFOBB East Span. The schedule for the SFOBB East Span Seismic Replacement project does not include the schedule risks that have been projected by the risk management activities (Appendix C). Chart 1 - Toll Bridge Seismic Retrofit Program Schedule, shows the baseline AB 144/SB 66 project schedule versus the projected completion schedules for the TBRSP projects under construction.

Chart 1. Toll Bridge Seismic Retrofit Program Schedule Baseline AB 144/SB66 vs. Projected Schedule



# **Program Funding and Financing**

AB 144 established a funding level of \$8.685 billion for the TBSRP. The bill specifies funding sources for the program, as shown in *Table 5 -Program Budget*.

## Table 5 – Program Budget As of September 30, 2005

(\$ millions)

#### **Fund**

AB 1171 Funding	Budgeted	Allocated
Proposition 192	\$790.00	\$789.00
Toll Bridge Seismic Retrofit Account (TBSRA)		\$3,143.73
Seismic Surcharge Revenue	\$2,282.00	
San Diego Coronado Toll Bridge Revenue Fund	\$33.00	
Vincent Thomas Bridge	\$15.00	
State Highway Account (SHA) <sup>(1)</sup>	\$795.00	
Public Transportation Account (PTA) <sup>(2)</sup>	\$80.00	
ITIP/SHOPP/Federal Contingency	\$448.00	
Federal Highway Bridge Replacement and Rehabilitation (HBRR)	\$642.00	\$635.50
AB 144 Funding		
Seismic Surcharge Revenue	\$2,150.00	
BATA Consolidation	\$820.00	
$SHA^{(3)}$	\$430.00	
Redirect Spillover	\$125.00	
Motor Vehicle Account	\$75.00	
Total	\$8,685.00	\$4,568.23

- (1) To date, \$354.6 million has been transferred from the SHA to the TBSRP. An additional \$104 million has been expended directly from the account. Caltrans anticipates receipt of the remaining balance in Fiscal Years 2005-06 and 2006-07, as directed by the California Transportation Commission.
- (2) To date, \$10 million has been transferred from the PTA to the TBSRP. Approximately \$70 million remains to be transferred. Caltrans anticipates receipt of such balance in Fiscal Years 2005-06 and 2006-07, as directed by the California Transportation Commission.
- (3) Includes \$300 million direct SHOPP contribution for demolition of existing SFOBB East Span.

**Note:** Program budget includes \$900 million program contingency.

Due to the rounding of numbers, the totals shown above are within \$0.02.

# **Funding Status**

The program's financial status of revenues and expenditures is summarized in the table below, *Table 6 -Toll Bridge Seismic Retrofit Program Financial Status*. The figures include the surcharge

revenues collected, transfers from the SHA and the Public Transportation Account (PTA), and expenditures from the Toll Bridge Seismic Retrofit Account (TBSRA) and the Seismic Retrofit Bond Act of 1996 (Proposition 192). Through September 2005, \$789 million provided by Proposition 192 has been allocated by the California Transportation Commission (CTC).

	As of September 30, 2005 (\$ millions)	
<b>Revenues:</b>		
Toll	Surcharge <sup>(1)</sup>	\$687.90
SMI	F Interest	\$80.19
Bono	l Revenue (Seismic Bond of 1996)	\$790.00
Bono	l Revenue (Toll Revenue Bonds)	\$1,062.00
Com	mercial Paper <sup>(2)</sup>	\$80.00
SAN	DAG	\$33.00
Vinc	ent Thomas	\$6.90
Fede	ral Highway Bridge Replacement and Rehabilitation	\$300.00
Transfers to		
State	Highway Account (SHA) <sup>(3)</sup>	\$458.76
Publ	ic Transportation Account (PTA) <sup>(4)</sup>	\$10.00
	Total Revenues and Transfers	\$3,508.75
Expenditures:		
Capi	tal Outlay	\$2,630.95
State	Operations	\$818.64
	Total Expenditures	\$3,449.59
<b>Encumbrances:</b>	•	•
Capi	tal Outlay	\$1,090.06
	Operations	\$28.58
State	operations.	
State	Total Encumbrance:	

- (1) The Toll Surcharge is dedicated to repayment of bonds beginning September 1, 2003. Toll Surcharge shown here is only toll revenue collected prior to that date.
- (2) \$80 Million in Commercial Paper issued on or about April 5, 2005.
- (3) To date, \$354.6 million has been transferred from the SHA to the TBSRP. An additional \$104 million has been expended directly from the account. Caltrans anticipates receipt of the amount remaining of the \$795 million in SHA funds authorized under AB 1171 will be transferred in Fiscal Years 2005-06 and 2006-07, as directed by the California Transportation Commission.
- (4) To date, \$10 million has been transferred from the PTA to the TBSRP. Approximately \$70 million remains to be transferred. Caltrans anticipates transfer of the remaining PTA funds authorized under AB 1171 in Fiscal Years 2005-06 and 2006-07, as directed by the California Transportation Commission.

**Note:** Due to the rounding of numbers, the totals shown above are within \$0.02.

# **Program Financing**

As discussed above, AB 144 consolidated the administration of all toll revenues collected on the state-owned Bay Area toll bridges and financing of the TBSRP under the jurisdiction of BATA. BATA has direct programmatic responsibilities for the administration of all toll revenues collected on the state-owned bridges in the Bay Area and responsibilities for financial management of the TBSRP program, including:

- Administrative responsibility for collection and accounting of all toll revenues.
- Authorization to increase tolls on the stateowned bridges by \$1.00, effective no sooner than January 1, 2007.
- Project level toll setting authority as necessary to cover additional cost increases beyond the funded \$900 million program contingency in order to complete the toll bridge seismic retrofit program.
- Assumption of funding all of the roadway and bridge structure maintenance from Caltrans once bridge seismic retrofit projects are completed.

In accordance with its responsibilities provided under the law, in September 2005, BATA adopted a finance plan for the TBSRP. The major components of the finance plan include:

- Issuing \$6.2 billion in debt, including defeasance of \$1.5 billion in outstanding State Infrastructure Bank bonds and commercial paper;
- Increasing tolls on the state-owned bridges by \$1.00, (from \$3.00 to \$4.00 for two-axle vehicles), effective January 1, 2007;

- Securing the maximum amount of state funding early in the construction schedule to most efficiently use toll funds (see discussion below); and,
- Locking in current interest rates to the extent possible in order to improve the chances that the entire toll program construction and the operations and maintenance can be delivered within the \$4.00 auto toll level.

In September 2005, BATA approved a Finance Plan for the TBSRP. The finance plan calls for \$6.2 billion in new debt issuances, including defeasance of the existing outstanding State Infrastructure Bank bonds. Consistent with the finance plan, in December 2005, BATA approved the issuance of up to \$1.0 billion in 2006 toll bridge revenue bonds. The bond issuance will provide adequate cashflow to fund the Self-Anchored Suspension contract for the East Span Replacement project bid due on February 1, 2006.

Additionally, pursuant to the law, BATA held two public hearings, one in October and one in November 2005, to receive public testimony regarding the proposed \$1.00 seismic surcharge toll increase beginning on January 1, 2007 on the state-owned toll bridges in the Bay Area. BATA is expected to consider and act on the seismic surcharge increase in January 2006. BATA is acting well in advance of the statutory effective date for the toll increase in order to provide the bond rating agencies and financial institutions with clear assurances that BATA has taken the necessary steps to have the financial capacity to fund the seismic retrofit program.

Pursuant to AB 144, on September 29, 2005, the CTC adopted a schedule for the transfer of state funds to BATA to fund the TBSRP. The schedule contains the timing and sources of the state contributions, which begin in FY 2005-06 and distributes the contributions over the years of project construction to ensure a timely balance between state sources and the contributions from toll funds. The CTC's adopted schedule for the transfer of funds allows BATA to pledge the state

fund contribution to the financing of the TBSRP per BATA's adopted finance plan. The CTC schedule is included in Appendix D.

# **Project Status Completed Projects**

Seismic retrofit and project close-out has been completed on the Benicia-Martinez, Carquinez, San Mateo-Hayward, Richmond-San Rafael, Vincent Thomas, San Diego-Coronado toll bridges and on the West Span of the SFOBB. See *Table 7 -Cost Comparison AB 144/SB 66, 4<sup>th</sup> Quarter 2005 Forecast and Expenditures through September 2005 for Completed Bridges.* As discussed above, the

Richmond-San Rafael Bridge project expenditures have not been completely closed because Caltrans is in discussions with regulatory agencies regarding potential mitigations for impacts on fish in the project area.

The Richmond-San Rafael Bridge seismic retrofit was completed on July 29, 2005 and all construction activities for the project were completed on October 28, 2005.

The current cost forecast for the Richmond-San Rafael Bridge project includes approximately \$89 million in savings from the \$914 million project cost budgeted in the AB 144/SB 66 forecast, as projected in Caltrans' August 2004 cost reporting. The total budget estimate for the project includes \$16.9 million for the deck joint rehabilitation work, which is an eligible component of the overall seismic retrofit work for the bridge. The entire deck joint project was originally funded from RM 1 toll

Table 7 - Cost Comparison AB 144/ SB 66, Third Quarter Forecast and Expenditures through September 30 for Completed Bridges (\$ million)

Project	AB 144/ SB 66 Budget	Approved Changes	Current Budget	Cost To Date (9/05)	Estimate at Completion	Variance
a	b	С	d = b + c	е	f	g = f - d
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit Project	308	-	308	305	308	-
Carquinez Bridge Retrofit Project	114	-	114	114	114	-
Benicia-Martinez Bridge Retrofit Project	178	-	178	178	178	-
San Mateo-Hayward Bridge Retrofit Project	163	-	163	163	163	-
Richmond-San Rafael Bridge Retrofit Project	914	-	914	788	825	(89)
Vincent Thomas Bridge Retrofit Project	58	-	58	58	58	-
San Diego-Coronado Bridge Retrofit Project	104	-	104	102	104	-
TOTAL	1839	-	1839	1708	1750	(89)

Note: Details may not sum to totals due to rounding effects. Capital Outlay Support and Capital Outlay have been combined.

funds. In July 2005, with concurrence from Caltrans, BATA rescinded \$16.9 million in RM 1 funds from the deck joint project. To backfill the RM 1 funding, Caltrans committed an equivalent amount of seismic retrofit funding to the deck joint portion of the project. This action was taken to make additional RM 1 funds available for the Benicia-Martinez Bridge New Span project. The budget for the Richmond-San Rafael Bridge Seismic Retrofit project includes \$16.9 million of costs for the deck joint rehabilitation work.

Caltrans is finalizing project plans and specifications for a public access lot on the Marin side of the bridge to comply with a Bay Conservation and Development Commission (BCDC) permit condition.

To close out the project, Caltrans faces potential exposures concerning the environmental mitigation for negative impact on fish, which is currently being discussed with regulatory agencies.

Final savings for the Richmond-San Rafael Bridge

project will be based on the resolution of pending negotiations with environmental permitting agencies regarding cost of pile driving mitigation. The project cost forecast allows the project budget to be reduced by \$82 million in CO and \$7 million in COS. Since the project is under budget, the \$54 million of the total \$900 million Program Contingency budgeted for the Richmond-San Rafael project will not be required for that project and will remain available for other program expenditures. As shown in *Table 4*, the \$89 million savings for the project adds to the total Program Contingency for the TBSRP (See Appendix A).

To close out the project, Caltrans faces potential exposures concerning the environmental mitigation for negative impacts on fish, which is currently being discussed with regulatory agencies.



Richmond-San Rafael Toll Bridge

# **On-going Construction Projects**

## **SFOBB West Approach**

The SFOBB West Approach seismic retrofit project will remove and replace the west approach to the SFOBB, which includes all of the westbound mainline and most of the eastbound mainline from 4<sup>th</sup> Street to the SFOBB West Anchorage, and all of the connecting entrance and exit ramps in downtown San Francisco. The construction work, which began in June 2003, is approximately 63 percent complete. Completion of this project is scheduled for 2009.

Upon completion of the retrofit project, the West Approach mainline and ramps will have the same number of traffic lanes as before, but with improved highway geometrics. The mainline eastbound and westbound structures will be adjacent to each other at 4<sup>th</sup> Street and transition to their own independent support system configuration from Rincon Hill to the anchorage in order to tie into the existing SFOBB.

## **Milestones Achieved**

Following the re-striping of the new Fremont Street off-ramp to accommodate three lanes, the Harrison Street off-ramp was closed for reconstruction on September 6, 2005. The ramp will remain closed for three years. Demolition of the ramp occurred on November 5 and 6, 2005. Impacts to the adjacent neighborhood were minimized through the completion of this demolition in only one weekend.

After the shift of the westbound mainline traffic in September 2005, Caltrans completed the technically challenging demolition of the first of four anchorage areas on October 16, 2005. Completed over five weekends, this complicated work presented significant construction staging and traffic control

issues and risks that were successfully mitigated by Caltrans. Lessons learned by Caltrans during these demolition operations will help to reduce future risks during future similar operations need for the demolition of the remaining three anchorage areas.

Prior to the demolition of the first of four anchorage areas, Caltrans launched an outreach campaign to inform the media and the public of the upcoming activities, including the demolition work on the anchorage spans. Caltrans has also established a real-time media response team to disseminate up-to-date information to the public on all time-sensitive activities.

Following demolition of this anchorage area, the contractor commenced with the erection of falsework for construction of the new frame 7U(N), an operation that is critical to the completion of the West Approach. Major work during December 2005 included cast in drilled hole (CIDH) and cast in steel shell (CISS) pile driving operations for the mainline, 5th Street and Harrison off ramps; preparation and steel work prior to the early Spring 2006 demolition of Frame 8U(N); the continuation of 4th Street retrofit work; and the start of Stage 2 Frames 1U and 2U for the SFOBB Line Westbound structure.

## **Project Funding**

The AB 144/SB 66 baseline budget totals \$429 million for the project with \$309 million for CO and \$120 million for COS. See *Table 8 - Baseline and Estimated Budget Need for SFOBB West Approach.* 

Table 8 - Baseline and Estimated Budget Need for SFOBB West Approach (\$ million)

	AB 144/ SB 66 Budget	4 <sup>th</sup> Quarter Forecast	Difference
COS	120	120	-
CO	309	309	-
Total	429	429	-

## **Major Risk Issues**

Caltrans' West Approach risk management team is continuing with its efforts to manage project risks. During the quarter, no new significant risks have surfaced.

A major risk element involving the demolition procedures at the first of the four anchorage areas has been resolved and no longer jeopardizes the project's objectives. The three remaining anchorage areas are still a substantial risk, but the unknowns have been significantly reduced by the experience and knowledge gained from the previous operations. With the success of the applied mitigation strategies and the lessons learned from the procedures at the first anchorage, the West Approach project team is confident that the risks related to the demolition of the three remaining anchorage areas can be kept in check.

Some of the important lessons learned are as follows:

 BART services proved to be a successful mitigation effort and will continue to be used during future construction activities that can impact traffic patterns.

- The aggressive informational campaigns proved successful in mitigating adverse public perception.
- Equipment and labor resources were increased during low traffic times such as nights and weekends. This strategy reduced inconveniences to the surrounding residents and businesses and minimized impact to the regional motorists while maintaining the level of production required to keep the project on schedule.

Every effort is being made to contain the project risks by implementing the identified risk strategies so as to keep the project costs within the project budget; however, an allocation of budget from the program contingencies may eventually be required.

Based on this effort, the projected cost, including identified risks, is currently within the budget needs forecasted in AB 144/SB 66 (See Appendix A).



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## SFOBB East Span Seismic Replacement

The SFOBB East Span Seismic Replacement project will be seismically retrofitted through the complete replacement of the existing span. The project includes construction of the Skyway portion of the bridge, which consists of two parallel concrete structures, each approximately 1.3 miles in length; a Self-Anchored Suspension (SAS) Bridge consisting of a 510 foot tower supporting a bridge deck connecting the Skyway bridge to Yerba Buena Island (YBI), transition structures on YBI and on the east end of the bridge connecting to the toll plaza area, and demolition of the existing east span. The SFOBB East Span project now consists of 19 contracts. Note that the East End connection to the toll plaza, also known as the Oakland Touchdown contract, was split into four contracts by the TBPOC to facilitate construction flow. The 19 SFOBB East Span contracts are identified below:

## Eight contracts are **complete**:

- Interim Retrofit (Existing Bridge)
- East Span Retrofit (Existing Bridge)
- Pile Installation Demonstration
- Oakland Touchdown Geofill
- Yerba Buena Island (YBI) Archaeology
- USCG Road Relocation
- SAS Land Foundations (W2)
- YBI Electrical Substation

#### Three contracts are under **construction**:

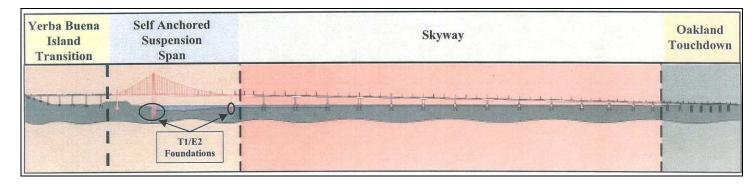
- Skyway contract (84 percent complete).
- South/South Detour (35 percent complete).
- SAS Marine Foundations (E2/T1) (This contract was re-started on July 29, 2005 and is 29 percent complete.)

## One advertised:

• Self-Anchored Suspension (SAS) (advertised August 1, 2005 with bids to be opened February 1, 2006).

#### Seven contracts are in design:

- Oakland Touchdown Contract 1
   (construction for westbound structure,
   eastbound marine foundation, eastbound
   detour, and electrical substation): The OTD
   original design is complete. However,
   Caltrans is working to split this contract
   from the original OTD scope for advertising.
   The contract is planned to be advertised in
   fall 2006 (newly split contract). Splitting
   the contract will remove elements of the
   Oakland Touchdown construction from the
   critical path for completion of the new East
   Span.
- Oakland Touchdown Contract 2 (construct eastbound superstructure, landscaping and



SFOBB East Span Replacement Project.

- maintenance road). The newly split contract is to be advertised in winter 2010.
- Oakland Touchdown Submarine Cable has also been newly split and is scheduled to be advertised for construction in early 2006.
- Oakland Touchdown Portions of the Corridor Electrical Contract representing the final portion of the newly split work.
- YBI Transition Structure design (80 percent complete).
- Stormwater Treatment Measures design is complete and the contract is to be advertised in early 2006.
- Existing Bridge Demolition design (10 percent complete).

The forecasted completion date as compared to the AB 144/SB 66 Baseline completion date for each of the major components of the SFOBB East Span Seismic Replacement project is shown in Table 9 SFOBB East Span Seismic Replacement Project Schedule Summary below. There is a potential delay to the Skyway contract schedule due to issues with the fabrication of the hinge pipe beams that connect the major frames of the bridge. Also, the East Span opening date has been delayed by six months due to the TBPOC approval and Caltrans' issuance of Addendum #5 to the SAS contract. This addendum extended the completion date of the SAS contract by six months, in response to bidder inquiries, and to attract more bidders and lower project costs.

Table 9. SFOBB East Span Seismic Replacement Project Schedule Summary

Contract	AB 144/SB 66 Baseline Project Completion Date	4 <sup>th</sup> Quarter Forecast Project Completion Date	Variance (Months)
Skyway	April 2007	April 2007	-
YBI South / South Detour	July 2007	July 2007*	-
Stormwater Treatment Measures	March 2008	March 2008	-
SAS E2/T1 Foundations	June 2008	March 2008	(3)
Open to Traffic: West Bound	September 2011	March 2012	6
SAS Superstructure	March 2012	September 2012	6
Open to Traffic: East Bound	September 2012	March 2013	6
Oakland Touchdown	November 2013	November 2013*	-
♦ OTD Submarine Cable	N/A	July 2007	-
♦ OTD Westbound	N/A	July 2009	-
♦ OTD Eastbound	N/A	November 2013	-
YBI Transition Structures	November 2013	November 2013*	-
Existing Bridge Demolition	September 2014	September 2014*	-

Note: The New East Span forecast to be fully open to traffic in 2013. Construction activities will continue beyond that date to complete the project, including demolition of the existing structure.

\*Project schedules under assessment due to 6 month extension of the SAS contract schedule.

#### **Milestones Achieved**

- The Skyway contract is currently in construction and is 84% complete as of December 20, 2005. The Foundation work is complete with the exception of installing Fenders around six of the pier footings. The Fender work is currently scheduled to begin in January 2006 and be completed by September 2006. The last remaining pier column was completed in late December 2005. The Pier Tables are 75% complete. Segment erection is currently 63% complete. The Eastbound structure is 96% complete, while the Westbound structure is 30% complete. The Stockton pre-cast yard continues to maintain a steady pace of casting one concrete bridge segment every two to three days in each of the two casting beds or roughly 5 segments per week. Currently, 403 of 452 segments or 89% have been cast with the remaining 49 segments scheduled to be complete by June 2006. A total of 284 segments (63%) have been installed to date. Caltrans and Contractor positions concerning the Hinge Pipe Beam fabrication issues have been heard by a Dispute Resolution Board (DRB) during November and December 2005. The DRB decision is expected in January 2006.
- The SAS Superstructure Contract was readvertised on August 1, 2005. Bid opening is scheduled for February 1, 2006. Outreach sessions held during the 4th quarter included a final outreach meeting for potential bidders on November 30, 2005. In addition to continuing with actions taken to encourage additional bidders for the project, Caltrans has evaluated and responded contractor inquires, resulting in the release of six addenda. Key technical issues addressed included the clarification and revision of various technical specifications, and the revision of the SAS contract schedule wherein the overall contract time was increased by 6 months. This was done in response to requests from two major firms which would potentially submit bids on this contract.

- Work on the E2/T1 contract was suspended in January 2005 with approximately 29% of the work completed. In July 2005, Caltrans notified the contractor to restart the work on the project. In November 2005, the TBPOC approved, and in December 2005, the contractor signed, a change order involving contract changes and compensation for the suspension and re-start of work. Contractor has set the steel template for the piling for the T1 foundation and is continuing with field preparations for the resuming progress on this contract.
- The YBI South-South Detour contract was 35% complete as of December 20, 2005. To minimize impacts on the traveling public, portions of the East and West Tie-in operations remain suspended. The contract is performance based, whereby the contractor is responsible for both designing and constructing the detour structures. The contractor has formed and poured columns at Bents 48 and 49, and the construction of the other bents is also in progress. The contractor's engineer continues to perform design work on the east and west tie-in structures for the detour.
- Work on contracts in design continues. The Stormwater Treatment Measures contract to implement best practices for stormwater runoff treatment will be advertised in early 2006. The TBPOC approved the splitting of the Oakland Touchdown Contract into four multiple contracts to reduce the risk of any of this work impacting the project schedule. Of these, the first contract to be completed involves the relocation of a submarine electrical cable from Oakland to Treasure Island, and is forecast to finish in August 2008. The YBI South-South Detour contract is the subject of a Value Analysis study conducted by Caltrans. The design of the Bridge Demolition contract is at 10% complete and currently on hold.

### **Project Funding**

### **Baseline and Projected Budget and Schedule**

The AB 144/SB 66 baseline budget for the SFOBB East Span is \$5.487 billion with \$4.528 billion for CO and \$959 million for COS. This amount does not include program contingencies. See *Table 10*. *SFOBB East Span Replacement Cost Summary*.

**Table 10 - SFOBB East Span Replacement Cost Summary (\$Millions)** 

Contract a	AB 144/ SB 66 Budget b	Approved Changes c	Current Budget d = b + c	Cost To Date (09/2005) e	Estimate at Completion f	Variance g = f - d	
Capital Outlay Support	960	-	960	385	977	17	
Capital Outlay Construction							
Skyway	1,293	-	1,293	911	1,293	-	
SAS Superstructure	1,754	-	1,754	-	1,767	13	
SAS E2/T1 Foundations	314	-	314	66	314	-	
YBI Structures	299	-	299	-	318	19	
Oakland Touchdown	284	-	284	-	273	(11)	
YBI South/South Detour	132	-	132	28	134	2	
Existing Bridge Demolition	239	-	239	-	222	(17)	
Stormwater Treatment Measures	15	-	15	-	15	-	
East Span Completed Projects	90	-	90	89	90	-	
Right-of-Way and Environmental Mitigation	72	-	72	39	72	-	
Other Budgeted Capital	35	-	35	-	11	(24)	
TOTAL	5,487	-	5,487	1,517	5,487	-	

Note: Details may not sum to totals due to rounding effects.

Caltrans re-evaluates project and contract cost forecasts continuously. The Estimate-at-Completion as of December 31, 2005 includes revised forecasts from AB 144/SB 66 budget, as follows:

- A forecasted \$13 million increase for the Self-Anchored Suspension (SAS) Superstructure
   Contract to cover actions taken to encourage additional bidders for the project, including the increase to the bidder's stipend to \$3 million for the lowest three responsive bidders.
- A forecasted \$19 million increase for the Yerba Buena Island (YBI) Transition Structure Contract due to a higher estimate for electrical work and scheduling.
- A forecasted \$11 million decrease in the capital outlay for the Oakland Touchdown (OTD) Contract due to the split of the OTD contract into multiple contracts to accelerate work and to reduce schedule risks. The capital outlay support for the contract was increased to cover the additional work to split the contract and to administer four separate contracts over a longer duration rather than the original single contract.
- A forecasted \$17 million decrease for the Bridge Demolition Contract due to a re-evaluation of the cost escalation rates for the project.

All of the variances discussed above can be funded from Other Budgeted Capital and do not reflect an overall change in forecast for the SFOBB East Span project.

The AB 144/SB 66 baseline schedule for seismically retrofitting the structure and opening the bridge to traffic in both directions is 2012.

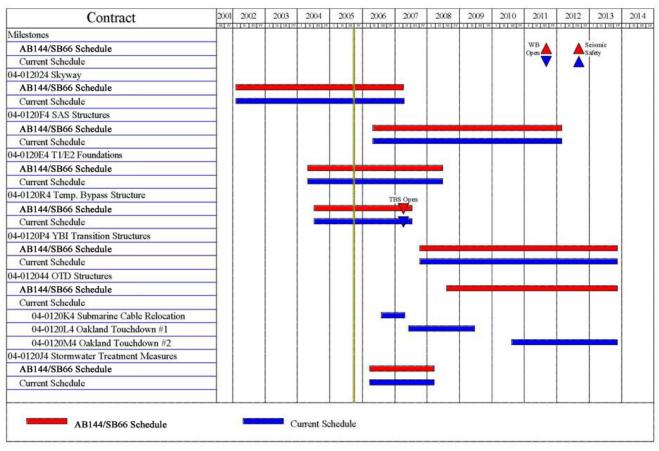
However, the forecast opening date has been revised to 2013 due to the TBPOC approval and Caltrans issuance of Addendum #5 to the SAS contract. This addendum extended the completion date of the SAS contract by 6 months in response to bidder inquiries and to attract more bidders and lower project costs. The completion of the East Span has been forecast for 2014. However, the overall East Span schedule is being re-assessed to fully understand the impact of the SAS schedule

increase of 6 months. This schedule does not provide for the estimated schedule risk associated with the construction of the East Span.

Completion of the TBSRP will occur approximately two years after the new East Span bridge is open to traffic, marked by the planned demolition of the existing SFOBB East Span.

The comparison of the AB 144/SB 66 baseline schedule and the current projected schedule is shown in *Chart 2 -SFOBB East Span Corridor Schedule, Baseline AB 144/SB 66 vs. Current Projected.* It should be noted that the schedules shown in *Chart 2* do not at this time account for the issues with the fabrication of the hinge pipe beams on the Skyway contract and the potential issues that may affect the schedule identified in the SFOBB East Span Seismic Retrofit Project Risk Management Plan.

Chart 2. San Francisco-Oakland Bay Bridge East Span Corridor Schedule Baseline AB 144/SB66 vs. Current Projected

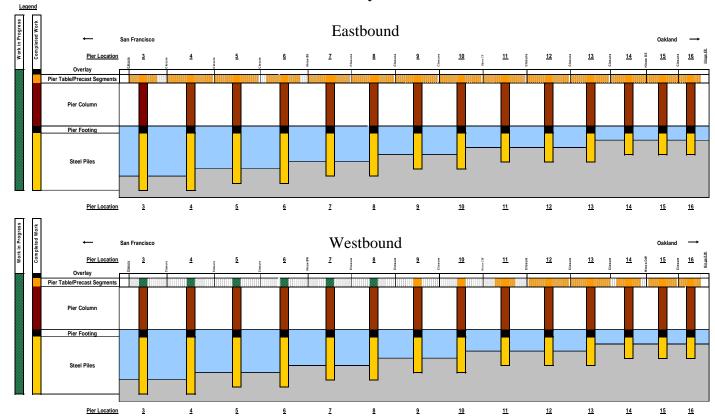


### **Major Risk Issues**

### SFOBB East Span Project Replacement Risk Management Plan

Caltrans is implementing comprehensive risk management on all SFOBB East Span Seismic Replacement Project contracts in accordance with its SFOBB risk management plan. Currently, managing SAS and E2/T1 contract risks is receiving special emphasis because a risk sensitivity analysis indicates that timely risk responses on these contracts will result in the greatest benefit to SFOBB East Span Seismic Retrofit Project and TBSRP costs and schedules. The Risk Management Plan for the SFOBB East Span project is included in Appendix C, which also discusses the previously mentioned potential schedule impact posed by fabrication issues on the Skyway hinge pipe beams.

### San Francisco-Oakland Bay Bridge East Span Seismic Replacement Project -Skyway Contract Progress Diagram January 2006



### **Other Project Issues/Activities**

### **Welding Issues on the Skyway Foundations**

The investigations of defective welding allegations on the Skyway contract as reported in the media in April 2005 are near completion.

In February 2005, a group of 15 contractor welders claimed they performed substandard welding in the pile head connection plates inside the foundation structure. Subsequently, the Federal Bureau of Investigation initiated an investigation into welding quality in conjunction with the United States Department of Transportation Office of the Inspector General and the Federal Highway Administration (FHWA). The technical field investigations were led by the FHWA. The investigations removed and examined completed welds at three locations, including two locations

alleged by the welders as containing substandard welds.

Following an exhaustive review by the FHWA, all welds examined were found to be of high quality and to exceed contract specifications. No evidence of substandard welding was found. In addition, FHWA stated that the QC/QA process for the East Span Seismic Replacement project met or exceeded that found in most other states. FHWA has completed final analyses of the allegations, and Caltrans is awaiting written confirmation concluding the investigation.

In addition to the federal investigation, the California Attorney General has initiated a separate investigation of the matter. The result of this investigation is pending. Caltrans is actively working with all agencies to conclude all investigations related to the welding quality on the Skyway contract.

### **Quarterly Environmental Compliance Highlights**

SFOBB East Span Seismic Replacement Project environmental tasks for the current quarter are focused on mitigation monitoring. All weekly, monthly, and annual compliance reports to resource agencies were delivered on time with no comments from receiving agencies. Key successes this quarter include:

- All participating agencies approved the North Basin Pilot Eelgrass Program, and sandflat construction was completed May 2005. Planting of eelgrass was completed July 2005. Assuming the pilot program is successful; 13 acres of eelgrass habitat will be planted at North Basin.
- The peregrine falcon pair has left the bridge for the season. Mitigation commitments to ensure that project construction does not interfere with bird nesting were successful and no delays to project construction resulted. The pair is expected to return in December 2005.
- The mitigation project committed to addressing 155 acres of storm water run-off has completed 100 percent design and is expected to go out to bid in winter 2005. The project will capture and treat 143.3 acres of storm water run-off. Caltrans is working with the Regional Water Quality Control Board to transfer funds for the remaining 11.3 acres of mitigation to be constructed by others within the same watershed. National Marine Fisheries Services, U.S. Fish and Wildlife Service (USFWS), and California Caltrans of Fish and Game (CDFG) granted approval of final design for this project during this quarter.
- Negotiations are underway with the USFWS, CDFG, and the Navy toward a

- January 2007 land transfer for the Skaggs Island Mitigation Program.
- Bay Conservation and Development Commission approved final design of the Shorebird Roosting Habitat Mitigation Project with Amendment No. 12 in April 2005. USFWS and CDFG also granted approval of final design for this project during this quarter.



Skyway Structure looking East from YBI.

### **Other Toll Bridges**

### **Dumbarton and Antioch Bridges.**

The original design of the Dumbarton and Antioch Bridges were based on design criteria developed after the 1971 San Fernando Earthquake. In the early 1990's, Caltrans determined that these two structures had the seismic resistant features required by the post 1971 codes and were not likely to be vulnerable during a major seismic event. Since that time, Caltrans has pursued an aggressive seismic research program, and based on the results of this program, significantly revised its seismic design practice in the late 1990's. Consistent with recommendations by the Caltrans Seismic Advisory Board, Caltrans regularly reassesses the seismic hazard and performance of its bridges. Due to the tremendous changes in seismic design practice that have occurred since the design of the Dumbarton and Antioch bridges, a comprehensive assessment

of the potential need and scope for seismic retrofit based on current knowledge is prudent

### **Previous Reports:**

A number of limited studies have been made of these bridges in the past. However, none of the studies have fully assessed the seismic performance of the structures under current standards.

### Vulnerability Studies

In late 2004, Caltrans initiated vulnerability studies on the Dumbarton and Antioch bridges. The purpose of these studies was to conclusively determine if the bridges would meet current seismic performance standards. The studies were essentially completed in May 2005. They were not a complete global analysis, but rather an investigation of selected bents modeled as independent structures. The analysis was limited in scope and based on asbuilt plans and currently available geotechnical information. The superstructure response was not analyzed.

The Dumbarton and Antioch Bridges have many seismic resistant features, and the results of the vulnerability studies indicate that the bridges should perform well in a moderate seismic event. However, during a major seismic event, some potential vulnerabilities (summarized below) become apparent.

Foundation response generally governs performance. The piles may plunge axially and potentially cause permanent footing rotations.

Potentially large foundation displacements and rotations may result in deformations that can't be easily repaired.

The bent cap, pile cap, pile and superstructure are not capacity protected by the ductile columns and, as a result, these elements may be damaged in a major event, especially if the foundation is retrofitted.

Given the limitations of the studies, there was insufficient evidence to conclusively determine the performance of the bridges during a maximum credible earthquake (MCE). While the Dumbarton and Antioch bridges may meet performance standards, a more comprehensive technical study is necessary to understand the performance of these structures during an MCE event. A study of this level is necessary to accurately determine the structures' response and to develop any necessary retrofit strategies. A comprehensive geotechnical study using the latest analysis techniques is likely necessary in order to perform this level of analysis.

### **Sensitivity Analysis**

As a follow-up to the Vulnerability Study, a sensitivity analysis is being performed on a single representative bent used in the Vulnerability Study (Bent 23 of the Dumbarton Bridge). The goal of the analysis is to determine the structural response associated with uncertainties in the geotechnical data. An envelope of soil conditions (best-case and worst case scenarios) was used in the analysis. The results of the Sensitivity Analysis will be used to determine the scope and value of conducting further geotechnical studies.

While the Sensitivity Analysis is ongoing, preliminary results indicate that the seismic response of the bridge is largely dependant on the soil conditions and that a comprehensive geotechnical investigation is essential for understanding the bridge's performance during a major seismic event. A work plan is being developed to assess the extent of geotechnical work needed for a complete seismic analysis and to assess the required performance levels for each structure.

### **Cost and Schedule**

A preliminary cost estimate, schedule, and an initial risk analysis have been developed to complete a comprehensive seismic analysis for each bridge. The preliminary estimate and schedule were developed as a baseline assuming a complete geotechnical and geophysical investigation is required at each bridge.

## **Appendices**

- A. TBSRP All Bridges AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures through September 30, 2005 Comparison (A-1 and A-2).
- B. TBSRP East Span Only AB 144/SB 66 Baseline Budget, Forecasts, and Expenditures through September 30, 2005 Comparison.
- C. San Francisco-Oakland Bay Bridge East Span Seismic Replacement Project Risk Management Plan.
- D. California Transportation Commission 4<sup>th</sup> Quarter Schedule.
- E. Project/Contract Photographs.

## Appendix A-1.

Toll Bridge Seismic Retrofit Program  AR 144/SR 66 Resoling Rudget, Forecasts and Expenditures Through Sentember 2005								
AB 144/SB 66 Baseline Budget, Forecasts and Expenditures Through September 2005 (\$ millions)								
Bridge	(\$ minions)	AB 144/SB 66 Baseline	3 <sup>rd</sup> Quarter 2005 Forecast	Expenditure Through				
				September 200				
Benicia-Mart	inez							
	Capital Outlay Support	\$38.14	\$38.14	\$38.0				
	Capital Outlay	\$139.69	\$139.69	\$139.7				
	Total	\$177.83	\$177.83	\$177.8				
Carquinez								
	Capital Outlay Support	\$28.67	\$28.67	\$28.8				
	Capital Outlay	\$85.46	\$85.46	\$85.4				
	Total	\$114.13	\$114.13	\$114.2				
San Mateo-H	ayward							
	Capital Outlay Support	\$28.14	\$28.14	\$28.0				
	Capital Outlay	\$135.37	\$135.37	\$135.3				
	Total	\$163.51	\$163.51	\$163.4				
Vincent Thor	mas							
	Capital Outlay Support	\$16.42	\$16.42	\$16.3				
	Capital Outlay	\$42.09	\$42.09	\$42.0				
	Total	\$58.51	\$58.51	\$58.4				
San Diego-Co	oronado							
	Capital Outlay Support	\$33.50	\$33.50	\$33.2				
	Capital Outlay	\$70.02	\$70.02	\$69.3				
	Total	\$103.52	\$103.52	\$102.5				
Richmond-Sa	nn Rafael							
	Capital Outlay Support	\$134.00	\$127.00	\$121.5				
	Capital Outlay	\$780.00	\$698.00	\$657.1				
	Total	\$914.00	\$825.00	\$778.6				
West Span R	etrofit							
	Capital Outlay Support	\$75.00	\$75.00	\$74.7				
	Capital Outlay	\$232.90	\$232.90	\$230.3				
	Total	\$307.90	\$307.90	\$305.1				
West Approa	ch							
	Capital Outlay Support	\$120.00	\$120.00	\$67.8				
	Capital Outlay	\$309.00	\$309.00	\$156.9				
	Total	\$429.00	\$429.00	\$224.7				
SFOBB East	•							
	Capital Outlay Support	\$959.30	\$977.00	\$385.1				
	Capital Outlay	\$4,492.19	\$4,498.60	\$1,131.5				
	Other Budgeted Capital	\$35.11	\$11.00					
	Total	\$5,486.60	\$5,486.60	\$1,516.6				
	Program Indirect	\$30.00	\$30.00	\$24.9				
	Subtotal Capital Outlay Support	\$1,433.17	\$1,443.87	\$793.7				
	Subtotal Capital Outlay	\$6,321.83	\$6,222.13	\$2,647.9				
	Subtotal Toll Seismic Retrofit	\$7,785.00	\$7,696.00	\$3,466.6				
	Program Contingency	\$900.00	\$989.00					
	T-t-1 T-11 C-ii- D-t C't D	¢0. (05.00	¢0. (05.00	\$2.4CC.CC				

### Notes:

(Due to the rounding of numbers, the totals above are shown within \$0.02).

Total Toll Seismic Retrofit Program

\$8,685.00

\$8,685.00

\$3,466.60

## Appendix A-2.

## Toll Bridge Seismic Retrofit Program AB 144/SB 66 Baseline Budget, Forecasts and Expenditures Through September 2005

	Column B	Column C	lions) Column D	Column E	Column F	Column G
		Expenditures to				
			Estimated Costs not		Allocation of the	
		Encumberances As	yet Spent or	Total Forecast	<b>Program Contingency</b>	
	AB 144/SB 66	of	Encumbered As of	As of	Reserve By Others in	Total with Program
	Baseline Budget	9/30/2005	9/30/2005	9/30/2005	August 2004.	Contingency As o
Bridge		See Note 1			See Note 2.	9/30/2005. See Note 2
ŭ				$\mathbf{E} = \mathbf{C} + \mathbf{D}$		G = E + F
Other Completed Projects  Capital Outlay Support	\$144.87	\$144.66	\$0.21	\$144.87		\$144.87
Capital Outlay	\$472.63	\$473.10	-\$0.47	\$472.63		\$472.63
Total	\$617.50	\$617.76	-\$0.26	\$617.50		\$617.50
Richmond-San Rafael	\$017.50	\$017.70	-\$0.20	\$017.50		\$017.50
Capital Outlay Support	\$134.00	\$123.03	\$3.97	\$127.00	\$9.00	\$136.00
Capital Outlay	\$780.00	\$646.79	\$51.21	\$698.00	\$45.00	\$743.00
Project Reserves	Ψ700.00	φοτο.77	\$0.00	ψ0,0.00	\$89.00	\$89.00
Total	\$914.00	\$769.82	\$55.18	\$825.00	\$143.00	\$968.00
West Span Retrofit	\$914.00	\$709.62	φ33.16	\$623.00	\$143.00	\$200.00
Capital Outlay Support	\$75.00	\$75.08	-\$0.08	\$75.00		\$75.00
Capital Outlay	\$232.90	\$239.95	-\$7.05	\$232.90		\$232.90
Total	\$307.90	\$315.03	-\$7.03 -\$7.13	\$307.90		\$307.90
West Approach	φ507.90	φ515.05	-φ1.13	φ301.90		φ507.90
Capital Outlay Support	\$120.00	\$68.82	\$51.18	\$120.00	\$6.00	\$126.00
Capital Outlay	\$309.00	\$472.46	-\$163.46	\$309.00	\$28.00	\$337.00
Total	\$429.00	\$541.28	-\$112.28	\$429.00	\$34.00	\$463.00
SFOBB East Span -Skyway	Ψ127.00	ψ5-11.20	Ψ112.20	Ψ-127.00	Ψ34.00	φ105.00
Capital Outlay Support	\$197.00	\$114.23	\$82.77	\$197.00	\$38.00	\$235.00
Capital Outlay	\$1,293.00	\$1,475.64	-\$182.64	\$1,293.00	\$191.00	\$1,484.00
Total	\$1,490.00	\$1,589.87	-\$99.87	\$1,490.00	\$229.00	\$1,719.00
SFOBB East Span -SAS- Superstructure	Ψ1, +70.00	Ψ1,505.07	-φ22.01	\$1,470.00	Ψ227.00	ψ1,717.00
Capital Outlay Support	\$214.63	\$16.87	\$197.76	\$214.63	\$70.00	\$284.63
Capital Outlay	\$1,753.72	\$0.00	\$1,767.43	\$1,767.43	\$353.00	\$2,120.43
Total	\$1,968.35	\$16.87	\$1,965.19	\$1,982.06	\$423.00	\$2,405.06
SFOBB East Span -SAS- Foundations	Ψ1,700.33	Ψ10.07	ψ1,703.17	\$1,702.00	ψτ23.00	Ψ2,403.00
Capital Outlay Support	\$62.50	\$18.46	\$44.04	\$62.50	\$6.00	\$68.50
Capital Outlay	\$339.91	\$217.39	\$122.52	\$339.91	\$30.00	\$369.93
Total	\$402.41	\$235.85	\$166.56	\$402.41	\$36.00	\$438.4
Small YBI Projects	ų 102111	4200.00	Ψ100.50	ψ.102.11	Ψ20100	Ψ15011
Capital Outlay Support	\$10.58	\$10.07	\$0.51	\$10.58		\$10.58
Capital Outlay	\$15.66	\$16.11	-\$0.45	\$15.66		\$15.66
Total	\$26.24	\$26.18	\$0.06	\$26.24		\$26.24
South/South Detour	Q20.2.	Ψ20.10	Ψ0.00	Ψ20.2 .		Ψ20.2
Capital Outlay Support	\$29.50	\$13.78	\$15.72	\$29.50	\$2.00	\$31.50
Capital Outlay	\$131.92	\$90.02	\$43.73	\$133.75	\$9.00	\$142.75
Total	\$161.42	\$103.80	\$59.45	\$163.25	\$11.00	\$174.25
YBI - Transition Structures	ψ101.12	Ψ105.00	457.75	¥100.20	Ψ11.00	Q1,1.2.
Capital Outlay Support	\$78.65	\$8.57	\$70.08	\$78.65	\$8.00	\$86.65
Capital Outlay	\$299.36	\$0.00	\$318.49	\$318.49	\$39.00	\$357.49
Total	\$378.01	\$8.57	\$388.57	\$397.14	\$47.00	\$444.14
Oakland Touchdown	45,0101	Ψο.υ.,	Ψ500.57	φυγίτι	ψ.7.00	Ψ
Capital Outlay Support	\$74.40	\$19.95	\$72.15	\$92.10	\$8.00	\$100.10
Capital Outlay	\$283.80	\$0.00	\$272.70	\$272.70	\$38.00	\$310.70
Total	\$358.20	\$19.95	\$344.85	\$364.80	\$46.00	\$410.80
East Span Other Small Project	4555.20	417.75	Ψ555	450.130	ψ.0.00	ψ.10.00
Capital Outlay Support	\$212.32	\$193.10	\$19.22	\$212.32		\$212.32
Capital Outlay	\$170.78	\$89.55	\$57.12	\$146.67		\$146.67
Total	\$383.10	\$282.65	\$76.34	\$358.99		\$358.99
Existing Bridge Demolition			4.5.5.	,,		+
Capital Outlay Support	\$79.72	\$0.19	\$79.53	\$79.72	\$3.00	\$82.72
Capital Outlay	\$239.15	\$0.00	\$221.99	\$221.99	\$17.00	\$238.99
Total	\$318.87	\$0.19	\$301.52	\$301.71	\$20.00	\$321.71
Program Indirect	\$30.00	\$40.41	-\$10.41	\$30.00	<b>\$20.00</b>	\$30.00
Total Capital Outlay Support <sup>3</sup>	\$1,433.17	\$806.81	\$637.06	\$1,443.87	\$150.00	\$1,593.87
Total Capital Outlay	\$6,321.83	\$3,721.01	\$2,501.12	\$6,222.13	\$839.00	\$7,061.13
Program Total	\$7,785.00	\$4,568.23	\$3,127.77	\$7,696.00	\$989.00	\$8,685.00
rrogram rotal	\$7,785.00	<b>Φ4,308.23</b>	Ф3,147.77	\$7,090.00	\$989.00	\$8,085.00

<sup>1.</sup> Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 05/06.

BSA provided a distribution of program contingency in December 2004 based on Bechtel Infrastructure Corporation input.
 This column has since been revised to relect changes to the Richmond-San Rafael Bridge Forecast.

<sup>&</sup>lt;sup>3.</sup> Total Capital Outlay Support includes program indirect costs.

## Appendix B.

## Toll Bridge Seismic Retrofit Program - SFOBB East Span Only AB 144/SB 66 Baseline Budget, Forecasts and Expenditures Through September 30, 2005

(\$ in millions) 3<sup>rd</sup> Quarter 2005 **AB 144 Baseline Expenditures Through Forecast September 30, 2005 East Span Contract** SFOBB East Span -Skyway Capital Outlay Support \$197.00 \$197.00 \$112.56 Capital Outlay \$910.67 \$1,293.00 \$1,293.00 Total \$1,490.00 \$1,490.00 \$1,023.23 SFOBB East Span -SAS- Superstructure Capital Outlay Support \$214.85 \$14.21 \$214.63 Capital Outlay \$1,753.72 \$1,767.21 \$0.00 Total \$1,968.35 \$1,982.06 \$14.21 SFOBB East Span -SAS- W2 Foundations \$9.19 Capital Outlay Support \$10.00 \$10.00 Capital Outlay \$26.40 \$26.40 \$25.68 Total \$36.40 \$36.40 \$34.87 SFOBB East Span -SAS- E2/T1 Foundations Capital Outlay Support \$52.50 \$52.50 \$7.13 \$65.52 Capital Outlay \$313.51 \$313.51 Total \$366.01 \$366.01 \$72.65 YBI/SAS (Archeology) Capital Outlay Support \$1.08 \$1.08 \$1.08 Capital Outlay \$1.06 \$1.06 \$1.06 Total \$2.14 \$2.14 \$2.14 YBI - USCG Rd Relocation Capital Outlay Support \$3.00 \$3.00 \$2.67 Capital Outlay \$3.00 \$3.00 \$2.81 Total \$6.00 \$6.00 \$5.48 YBI - Substation & Viaduct \$6.50 \$6.50 \$6.31 Capital Outlay Support Capital Outlay \$11.60 \$11.60 \$11.18 Total \$18.10 \$18.10 \$17.49 Oakland Touchdown (Total, including the following split contracts and prior-to-split expenses) Capital Outlay Support \$18.72 \$74.40 \$92.10 Capital Outlay \$283.80 \$272.70 \$0.00 Total \$358.20 \$364.80 \$18.72 Oakland Touchdown Contract No. 1 Capital Outlay Support \$0.00 \$49.90 \$0.00 \$0.00 \$0.00 Capital Outlay \$196.73 Total \$0.00 \$246.63 \$0.00 Oakland Touchdown Contract No. 2 \$0.00 Capital Outlay Support \$0.00 \$15.80 Capital Outlay \$0.00 \$62.04 \$0.00 Total \$0.00 \$77.84 \$0.00 Oakland Touchdown Contract - Navy Cable \$0.00 Capital Outlay Support \$0.00 \$3.00 Capital Outlay \$0.00 \$9.55 \$0.00 Total \$0.00 \$12.55 \$0.00 Oakland Touchdown Contract - Electrical Systems \$0.00 \$0.00 \$1.40 Capital Outlay Support Capital Outlay \$0.00 \$4.38 \$0.00 Total \$0.00 \$5.78 \$0.00

## Appendix B (Cont.)

## Toll Bridge Seismic Retrofit Program - SFOBB East Span Only AB 144/SB 66 Baseline Budget, Forecasts and Expenditures Through September 30, 2005

(\$ in millions)

	(3	s in millions)		
		AB 144 Baseline	3 <sup>rd</sup> Quarter 2005	Expenditures Through
East Span Contra	et		Forecast	September 30, 2005
South/South Detour				
	Capital Outlay Support	\$29.50	\$29.50	\$12.97
	Capital Outlay	\$131.92	\$133.75	\$27.65
	Total	\$161.42	\$163.25	\$40.62
ATDI TO 11 O				
YBI - Transition Structures	Control Oction Connect	\$70.65	¢70.65	¢7.0
	Capital Outlay Support	\$78.65	\$78.65	\$7.00
	Capital Outlay	\$299.36	\$318.49	\$0.00
0.11 10 01	Total	\$378.01	\$397.14	\$7.00
Oakland Geofill	Consider Condition Common and	¢2.47	¢2.47	¢2.42
	Capital Outlay Support	\$2.47	\$2.47	\$2.47
	Capital Outlay	\$8.21	\$8.21	\$8.21
	Total	\$10.68	\$10.68	\$10.68
Pile Installation Demonstration	· ·	<b>0.4 =</b> 0	<b></b>	h. = c
	Capital Outlay Support	\$1.79	\$1.79	\$1.79
	Capital Outlay	\$9.25	\$9.25	\$9.25
	Total	\$11.04	\$11.04	\$11.04
Existing Bridge Demolition				
	Capital Outlay Support	\$79.72	\$79.72	\$0.19
	Capital Outlay	\$239.15	\$221.99	\$0.00
	Total	\$318.87	\$301.71	\$0.19
Stormwater Treatment Measur				
	Capital Outlay Support	\$6.00	\$6.00	\$3.51
	Capital Outlay	\$15.00	\$15.00	\$0.00
	Total	\$21.00	\$21.00	\$3.51
Right-of-way and Environmen				
	Capital Outlay Support	\$0.00	\$0.00	\$0.00
	Capital Outlay	\$72.40	\$72.40	\$38.74
	Total	\$72.40	\$72.40	\$38.74
Sunk Cost - Existing East Span				
	Capital Outlay Support	\$39.46	\$39.46	\$39.46
	Capital Outlay	\$30.81	\$30.81	\$30.81
	Total	\$70.27	\$70.27	\$70.27
Environmental Phase (Expend				
	Capital Outlay Support	\$97.70	\$97.70	\$97.67
Project Expenditures, Pre-split	s			
	Capital Outlay Support	\$44.90	\$44.90	\$44.88
Non-project Specific Costs				
	Capital Outlay Support	\$20.00	\$20.00	\$3.23
Subtotal East Span Capital Ou	tlay Support	\$959.30	\$977.00	\$385.10
Subtotal East Span Capital Ou		\$4,492.19	\$4,498.60	\$1,131.58
Other Budgeted Capital		\$35.11	\$11.00	<b>41,131.0</b> (
Total SFOB	R Fact Snan	\$5,486.60	\$5,486.60	\$1,516.68
Total SEOD	D Last Span	φ <b>5,400.00</b>	φ <b>5,400.00</b>	\$1,510.08

(Due to the rounding of numbers, the totals shown above are within \$0.02).

TBPOC approved the proposal to split the Oakland Touchdown contract to 4 smaller contracts on 09/23/05.

### Appendix C.

### San Francisco-Oakland Bay Bridge East Span Seismic Replacement Project Risk Management Plan

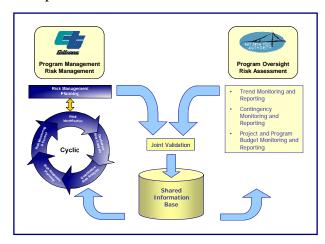
A summary of Caltrans' comprehensive risk management activities for the SFOBB East Span Seismic Replacement contracts is provided below.

### "One Mission, One Vision"

Caltrans and BATA have embarked on an initiative to manage risk jointly on the SFOBB project. The objective is to share program and project risk information to provide reliable risk assessments and risk

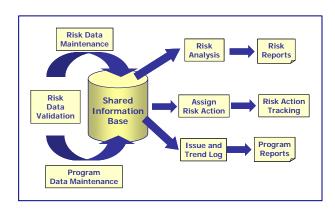
reports to the TBPOC in support of its decision-making processes.

Caltrans and BATA recognized that their risk management and program oversight activities would benefit from using a shared information base. The key to the cooperative effort is the joint evaluation of both risk and trend log data entered into the information base. While Caltrans and BATA will continue to discharge their respective responsibilities, they will rely on the same information for decisions and reporting. The marriage of risk management with trend monitoring will provide risk-based cost and schedule forecasts.



Caltrans and BATA will implement the "One Mission, One Vision" initiative in the first quarter of 2006. The initial actions are:

- Conduct workshops to:
  - o Lay the foundation for a common understanding of "risk" among the SFOBB constituency, and,
  - o Gain agreement on risk metrics.
- Implement the shared information base:
  - o Transfer and scrub risk register data
  - Populate all fields (qualitative and quantitative data)
  - o Data exchange for oversight functions
  - o Build report templates
  - o Enable risk response assignment and tracking
  - o Establish access for authorized users



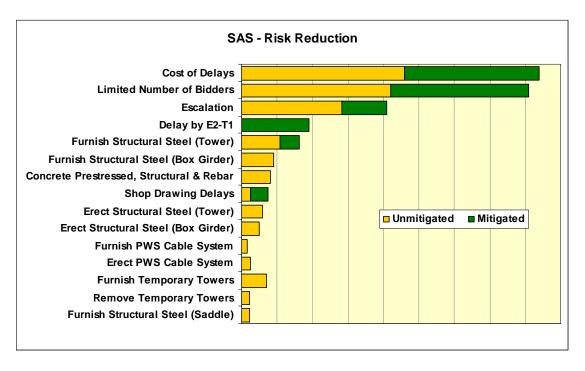
### **SAS Risk Management**

Current risk response efforts continue to focus on encouraging responsive bids for the SAS contract. Implementing prudent risk responses by SAS contract addenda reduces one of the SAS contract's most significant risks – a potential limited bidding pool.

Caltrans has conducted several industry and bidder outreaches and has responded to concerns raised by bidders. Addenda have been issued to facilitate bidder competition. Milestone DP1 has been removed from the SAS contract, thereby eliminating a contract interface that could have caused delays. Six months have been added to the other SAS milestones in response to bidders' concerns that the construction schedule was too short.

Cost risk analysis of the SAS contract is an ongoing process, with revisions from time to time as conditions of the project change. Many of the risk factors identified earlier have been mitigated. The Buy America provision has been removed, and several risk response efforts have been included to attract multiple bidders. The SAS schedule risk analysis can now be used to determine the cost of potential contract time extensions.

The draft SAS cost risk analysis was updated to incorporate the risk response measures to date. The main findings: there is less than a 5% likelihood of overrunning the \$2.120 billion "Total with Program Contingency" published in the TBSRP 3<sup>rd</sup> Quarter Report, and the risk response measures to date have reduced some risks significantly.

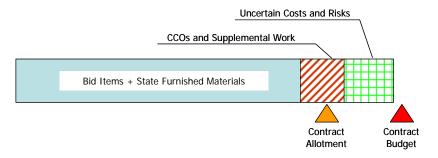


The cost of delays has been reduced as a result of having performed a quantitative schedule risk analysis to better define and evaluate delay risks. The continued participation of at least two bidders is evidence that Caltrans has been successful in reducing the risk of a limited bidding pool. Escalation and furnishing risks have been reduced by removal of the Buy America provisions. The restart of the E2-T1 contract was negotiated to minimize the risk that it could delay the SAS contract. The risk of delays in approving shop

drawings has been reduced by the "Campus" concept – having people involved in this process co-located to facilitate the timely resolution of complex technical issues arising from the review and approval of the Contractor's working drawings.

### **Risk in Budget Status Reporting**

Cost risk analyses of all subprojects and of Capital Outlay Support costs is proceeding. These analyses will provide input to a budget status bar chart currently under development.



Two regions of the bar chart will show the Bid Items and State Furnished Materials, and CCOs and Supplemental Work remaining. The third region will forecast the uncertain costs and risks, using results from the cost risk analysis models.

## Appendix D.

## California Transportation Commission TBSRP Contributions, Adopted September 2005.

### Schedule of Contributions to the Toll bridge Seismic Retrofit Program (\$ million)

Source	Description	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
	SHA Contribution	342	8								350
10474	PTA Contribution	30	40								70
AB1171	HBRR Contribution	100	100	100	42						342
	Contingency				1	99	100	100	148		448
	Efficiency Savings						53	50	27		130
AB 144	Motor Vehicle Fuel Account	75									75
AD 144	Spillover Transfer		125								125
	Demolition Cost									300	300
	Total	547	273	100	43	99	153	150	175	300	1840

## Appendix E.

## **Project/Contract Photographs.**

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

### **Skyway Contract**



Pier Column construction of the Westbound Skyway



Aerial view of the West end of the Skyway with temporary towers on the right



Skyway Construction-Water Level View



Use of Self Launching Erection Device (SLED) for Precast Concrete Deck Segments

## **Skyway Contract (cont.)**



Aerial View of Skyway Deck (looking west) 1



Aerial View of Skyway Deck (looking west) 2



Aerial View of Skyway Deck (looking west) 3



Aerial View of Skyway Construction (looking west) 1



Aerial View of Skyway Construction (looking west) 2



Aerial View of Skyway Construction (looking east)

## **Skyway Contract (cont.)**



Aerial View of SFOBB (looking east from the YBI)



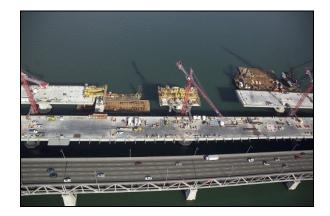
Aerial View of Pier 15 & 16



Aerial View of Pier 3,4 & 5 (looking east)



Aerial View of East-bound - West-bound Roadway Section (looking west) 1



Aerial View of East-bound - West-bound Roadway Section (looking west) 2



Aerial View of East-bound - West-bound Roadway Section (looking west) 3

## **Self-Anchored Suspension (SAS) Superstructure Contract**



SAS Superstructure Artist Rendition.



SAS Superstructure Artist Rendition Night Shot.

## **Self-Anchored Suspension (SAS) E2/T1 Foundation Contract**

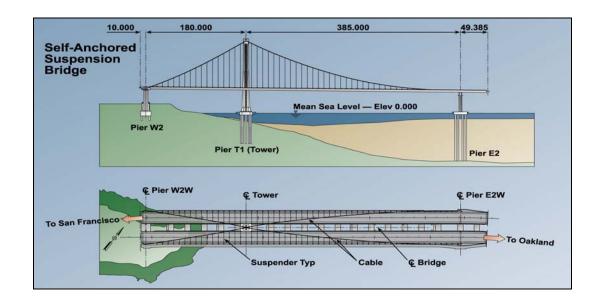


T1 = Foundation for the 530-foot steel tower

E2 = Eastern Support of the suspension roadway
W2 = Western Support of the suspension roadway



View of the completed W2 pier columns at the Yerba Buena Island, which will be the western support of the Self-Anchored Suspension (SAS) structure



## Yerba Buena Island (YBI) South/South Detour Contract



Pier Column Construction for Bents 50 and 51



Footing and Pier Columns for Bent 48



Piles for Bent No. 52



Drilling for CIDH piles for Bent 53



SoSoDet - Construction of columns for the viaduct portion of the Temporary Bypass Structure (TBS) adjacent to the U.S. Coast Guard Road on Yerba Buena Island



SoSoDet - Construction of Bent 48 grade beams along the former Southgate Road on Yerba Buena Island

## San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project



New Frame 7U north False work at bents 20 and 21



New 5th Street off ramp Bents 1 thru 5, CISS Piles



Frame 1U and 2U



Harrison St. Off-ramp Pre-demolition 1



Harrison St. Off-ramp Pre-demolition 2



Tendon Cutting

## San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project (cont.)



Harrison St. Off-ramp Demolition 1



Harrison St. Off-ramp Demolition 2



Harrison St. Off-ramp Demolition 3



Harrison St. Off-ramp Demolition 4



Harrison St. Off-ramp Demolition 5



Harrison St. Off-ramp Demolition 6

## San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project (cont.)



Temporary Support Frame (Super Bent at Bent #43) 1



Temporary Support Frame (Super Bent at Bent #43) 2



Temporary Support Frame (Super Bent at Bent #43) 3



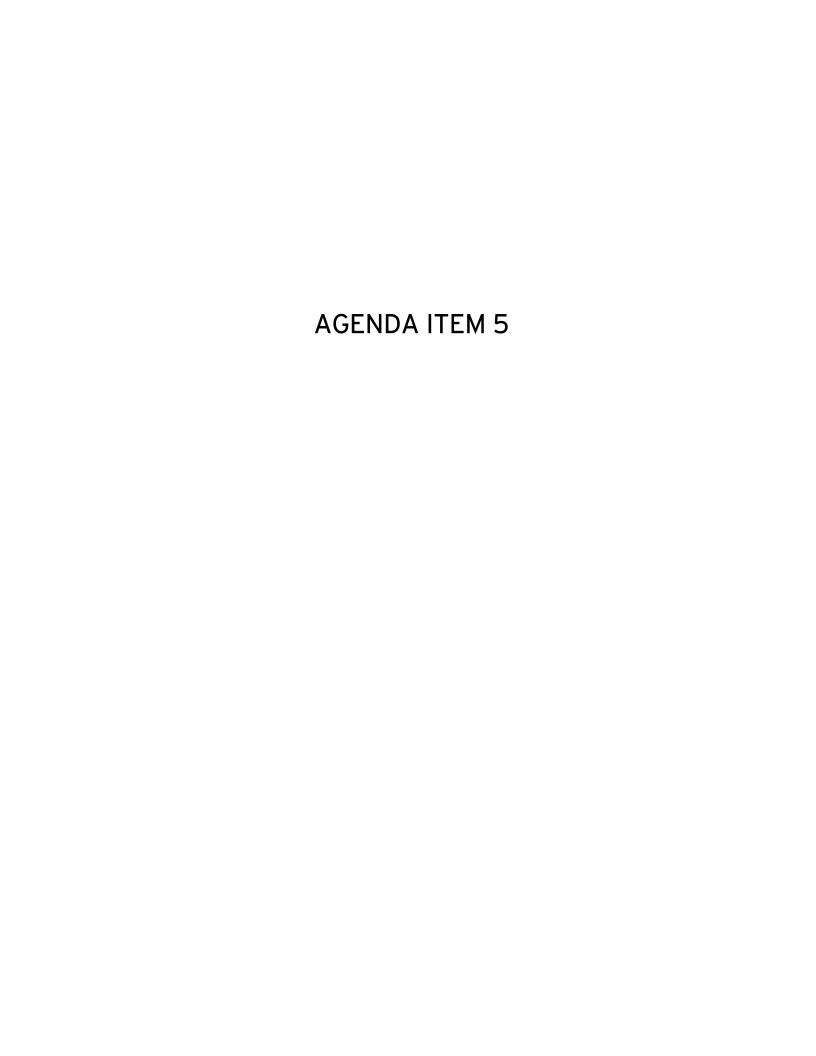
Temporary Support Frame (Super Bent at Bent #43) 4



Demolition of Frame 7U North & 8U North over First St. On-ramp 1



Demolition of Frame 7U North & 8U North over First St. On-ramp 2



#### DEPARTMENT OF TRANSPORTATION

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January 19, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: San Francisco-Oakland Bay Bridge (SFOBB) East Span SAS Contract – Estimate Update

Dear Committee Members:

The Department plans to present an estimate update of the SFOBB East Span SAS Contract at the January 19th TBPOC meeting. The update is for the Committee's information only.

JON TAPPING, Acting SFOBB East Span Project Manager

#### DEPARTMENT OF TRANSPORTATION

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January 19, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: San Francisco-Oakland Bay Bridge (SFOBB) East Span SAS Contract – Outstanding Bidder Inquiries Update

**Dear Committee Members:** 

The Department plans to present an update of the outstanding bidder inquiries for the SFOBB East Span SAS Contract at the January 19th TBPOC meeting. The update is for the Committee's information only.

JON TAPPING, Acting SFOBB East Span Project Manager

Attachment: Bidder Inquiry Status as of Jan. 6, 2006

### **BID INQUIRY STATUS**

		Date			Add.	CR	
Inq#	Subject	Submitted	Contractor	Resp. Person	#	#	Status
							JV resp in 12/21 (A7 item see note 9). Per 12/8 Ph conf JV rev
			American Bridge				pending (see comment 4). Resp To RM comm 12/7. JV 11/8. RM
184	Str- Breaking strength of "virgin" rope	10/12/2005	Company	Matthew Hunter	7		comm 11/8. RM 11/1. CG 10/28. JV 10/13.
	Str- Alternative Camber Method,		American Bridge				
	weight parameters	10/13/2005	Company	Matthew Hunter			BM review in progress per 12/8 ph conf. SS 11/29. JV 10/13.
	Str- Temporary Towers Seismic						
201	Design	11/9/2005	Kiewit Pacific	Matthew Hunter			BM 12/1. JV 11/9.
			Ishikawajima-				
211	Str- WT section steel	11/18/2005	Harima Industries	Matthew Hunter	6	154	Not in A6. Rev. resp pending. CG 12/1. JV 11/18.
			American Bridge				RM 1/3. CG 12/22. Part B PENDING #229 RESP. BATA comments
231	STR - Temp Tower Design	12/8/2005	Company	Matthew Hunter			to JV 12/19. JV 12/08.
			American Bridge				RM 1/3. CG 12/22. Part B,C PENDING #229 RESP. BATA
	STR - Temp Tower Design		Company	Matthew Hunter			comments to JV 12/19. JV 12/08.
	D4 - Mobile Daily Diary Vendor List		Miscellaneous	Bob Zandipour	6		RM 1/3. CG 12/29.
238	D4 - Daily Diary requirements	12/9/2005	Miscellaneous	Bob Zandipour			RM 12/19. CG - 12/09
246	Str- Temp. Loads, suspender brackets	12/19/2005	Kiewit Pacific	Matthew Hunter			RM 1/5. CG 1/3.
			Ishikawajima-				
248	Str- Material Calculations	12/19/2005	Harima Industries	Matthew Hunter			RM 1/9. CG 1/4.
	Str- Change the CJP to PJP		Miscellaneous	Matthew Hunter			RM 1/5. CG 1/3. JV 12/20.
250	Bid- Bid Opening	12/20/2005	Miscellaneous	Bill Zanetich			HOLD per JT.
			Ishikawajima-				
255	Str- Tower Mock-Ups	12/21/2005		Matthew Hunter			JV 12/21.
			American Bridge				RM 1/9. Proceed with proposed resp - comm addressed 1/4. Comm
256	Str- Weld Overlap	12/22/2005	Company	Matthew Hunter			To METS 1/3. BATA comm 1/3. CG 1/3.
			American Bridge				
	Str- Tower Assembly	12/22/2005	Company	Matthew Hunter			JV 12/22.
	Str- Temporary Tower Design		American Bridge				
259	Example, Ductility	12/22/2005	Company	Matthew Hunter			JV 12/22.
			American Bridge				
262	Bid- Postpone Bid Date	12/27/2005	Company	Robert Kobal	6		HOLD per JT.
			Ishikawajima-				
263	Str- Space to perform UT	12/28/2005		Matthew Hunter			JV/METS 12/29.
			Ishikawajima-				
264	Str- grillage segments	12/28/2005		Matthew Hunter			JV 12/29.
			American Bridge				
265	Sch- Use of completed Skyway	1/4/2006	Company	Michael Stone			CG 1/5.
			American Bridge				
	Str- ductile mechanism	1/4/2006	Company	Matthew Hunter			
267	Sch- Adding 6 months to milestones	1/4/2006	Kiewit Pacific	Michael Stone			

## Bay Bridge SAS Bid Opening Talking Points DRAFT

### Background

A single bid for the Self Anchored Suspension (SAS) portion of the new East Span of the Bay Bridge was received from the joint venture of American Bridge/Nippon Steel/Fluor Enterprises on May 26, 2004. The bid amount of \$1,398,776,550 (assuming foreign provided steel) was 90.79% over the Department's estimate of \$733,158,000. This bid was allowed to expire without awarding the contract because there were inadequate funds available.

California Governor Arnold Schwarzenegger signed Assembly Bill (AB) 144 on July 18, 2005 and Senate Bill (SB) 66 on September 29, 2005 providing a comprehensive financial plan for the Toll Bridge Seismic Retrofit Program and reaffirming the SAS design for the new bridge. This included consolidation and financial management of all toll revenues collected on the state-owned bridges in the San Francisco Bay Area under the jurisdiction of the Bay Area Toll Authority (BATA).

With the decision on bridge type and funding resolved, Caltrans advertised the SAS contract on August 1, 2005 and scheduled bid opening for February 1, 2006, estimating the cost at \$1.45 billion. (or FHWA range

### **Competitive Bidding**

Several important steps were taken following the signing of funding legislation to promote competitive bidding and to help reduce costs to potential bidders.

Bond Requirements were lowered to allow a greater range of potential bidders.

The Bidder Stipend was increased from \$1 million to \$3 million for the top three competitive bids to compensate companies for their preliminary work.

Through exhaustive value engineering and bidder outreach efforts, many contract enhancements to the SAS have been made by addenda prior to the SAS bid opening on February 1, 2006 in order to minimize risks to the construction schedule and to improve competitive bidding.

The TBPOC sponsored 3 contract bidder outreach meetings to improve communication and foster competitive bidding for the SAS in the months of September, October and November. As a result of these meetings and recent bidder inquiries schedule enhancements will be made to the San Francisco-Oakland Bay Bridge SAS contract.

An enhancement was made to the existing Cost Reduction Incentive Program that would give a greater return to the contractor in the event that they found more cost efficient methods for doing the work.

Overall contract cash flow was also improved. The contractor will now be paid for materials that are on hand and being fabricated as the work is in progress. This should ease financial burdens on the contractor during construction.

Working closely with the construction industry, the TBPOC has streamlined the drawing review process. A new simultaneous review procedure will be used for engineering drawings in favor of the original sequential review process.

To help reduce the risk of scheduling conflicts between neighboring contractors an innovative bridge hinge design enhancement was incorporated into the contract that eliminates a scheduling link that may have caused one contractor to delay another.

The currently advertised SAS contract provides 2,130 working days for project completion. The SAS contract was first advertised in 2003 with 2,310 working days provided. When the SAS project was re-advertised in August 2005, the contract schedule was six months shorter than the original SAS contract due to updated information about availability of the foundations needed for tower work. An additional 180 days has been added back to the current contract as a result of contractor outreach and bidder inquiries to accommodate for the time needed to produce and approve engineering drawings, full scale models and to address steel market concerns.

### **Potential Cost Impacts**

These increases were not forecast in the current SAS estimate.

Shipping costs have increased in the range of 50% to 70% since the project first advertised in 2004. Contractors might increase their bids to mitigate the risk of price increases on shipping over the life of the project.

Moving from a plate steel fabrication process to a forging process has improved the constructability of the steel pipe beams connecting bridge frames.

Operating costs have increased due to Diesel fuel cost escalation.

Increases to concrete, prestressing steel and other potentially domestic based steel purchases have increased due to Hurricane Impacts in the United States.

Bidding teams have requested that 12 months be added to the advertised schedule. The Department has added 6 months to the schedule through addendum enhancements. Bidders would have to accelerate fabrication.

Insurance and Bonding costs have increased due to the impact of hurricanes nationwide.

General contractors are bidding jobs higher and adding premiums on to estimates from subcontractors. There is a limited pool of eligible contractors to build the SAS, they may have to pay more money to attract labor during the current construction boom.

Although the Department has made every attempt to improve the current bidding environment to attract construction teams, the strength of those teams are based on their own internal organization. Should a bid team loose cohesion and pull their bid that will affect the value achieved through competitive bidding.

The total potential impact to the engineers estimate is between FHWA range. Multiple and single.

Need to add a Paragraph on potential cost mitigation provided by addenda enhancements. (Need input here)

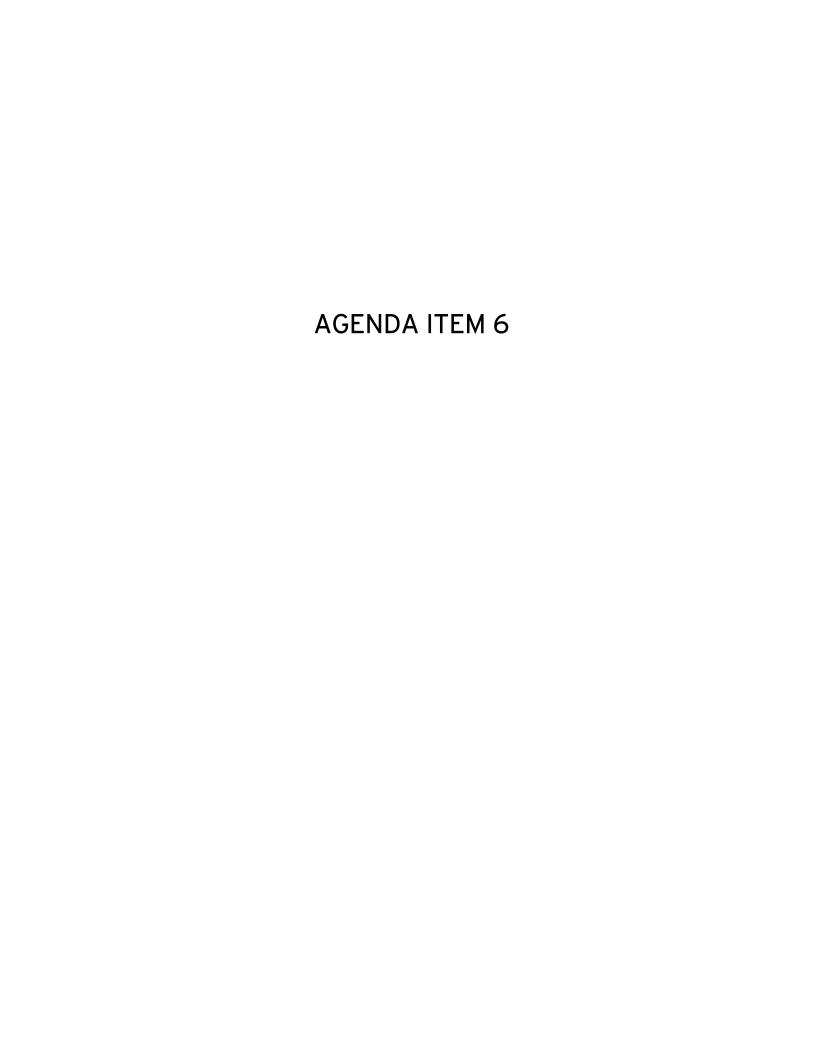
### **Construction Progress**

Construction continues on several of the major projects on the East Span.

The Skyway portion of the new East Span of the Bay Bridge is currently 84% complete and expected to finish in Spring of 2007.

On July 29, 2005 the SAS Marine Foundation contract was restarted. The contract is currently 27% complete and expected to finish in March of 2008.

The Yerba Buena Island Temporary Bypass structure is currently 34% complete with an estimated opening date to traffic in the summer of 2007.



#### DEPARTMENT OF TRANSPORTATION

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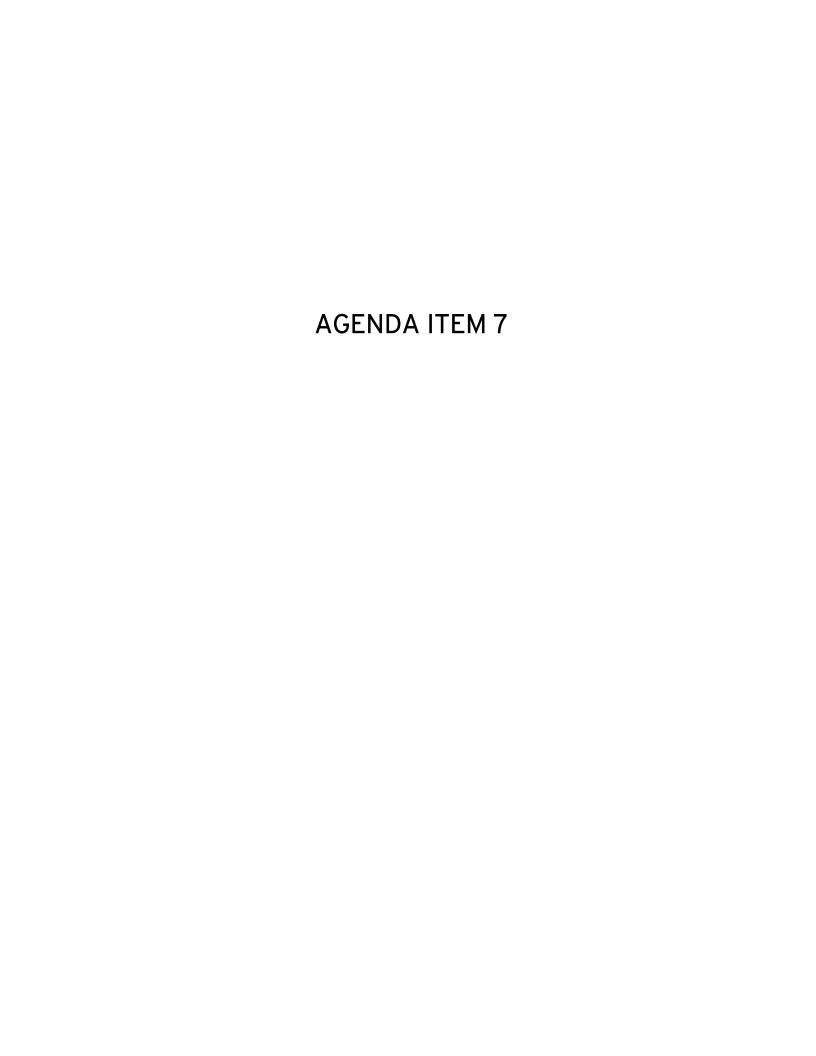
Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: San Francisco-Oakland Bay Bridge (SFOBB) East Span Skyway Contract – Hinge Pipe Beam Dispute Resolution Board (DRB) Update

Dear Committee Members:

The Department plans to present an update on the Hinge Pipe Beam DRB for the SFOBB East Span Skyway Contract at the January 19th TBPOC meeting. The update is for the Committee's information only.

JON TAPPING, Acting SFOBB East Span Project Manager



#### DEPARTMENT OF TRANSPORTATION

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Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: West Approach Project – Risk Management Review

**Dear Committee Members:** 

The Department plans to present a slide presentation on the Risk Management Review for the West Approach Project at the January 19th TBPOC meeting. The update is for the Committee's information only.

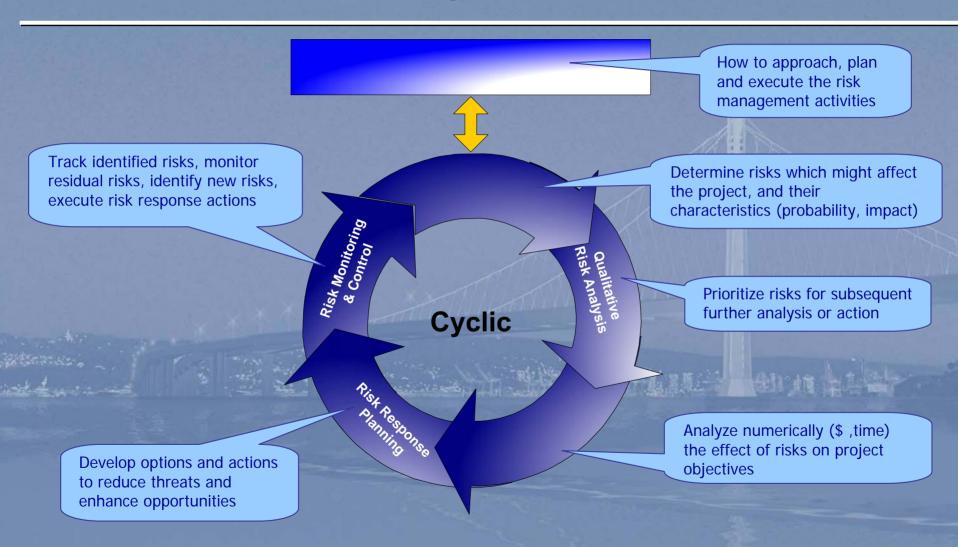
JON TAPPING, Acting SFOBB East Span Project Manager

Attachment: West Approach Project Risk Management Review Slide Presentation



# West Approach Risk Management

# Caltrans Risk Management Cycle



# Risk Response Team

Wassim Al-Basha Mike Forner

Ted Hall

Rein Lemberg Stephen Maller Raoul Maltez

Alec Melkonians

Bart Ney

Trinh Nguyen

Ivan Ramirez

Gudmund Setberg

Jon Tapping

Ken Terpstra Patrick Treacy

Dennis Turchon

Deanna Vilcheck

Margena Wade

Structure Representative

Principal Construction Engineer

BAMC

Caltrop

CTC

Construction Traffic Management

Project Engineer

**Public Information Officer** 

Risk Manager

Falsework Demolition Engineer

Senior Bridge Design Engineer

Caltrans

Project Manager

Caltrans

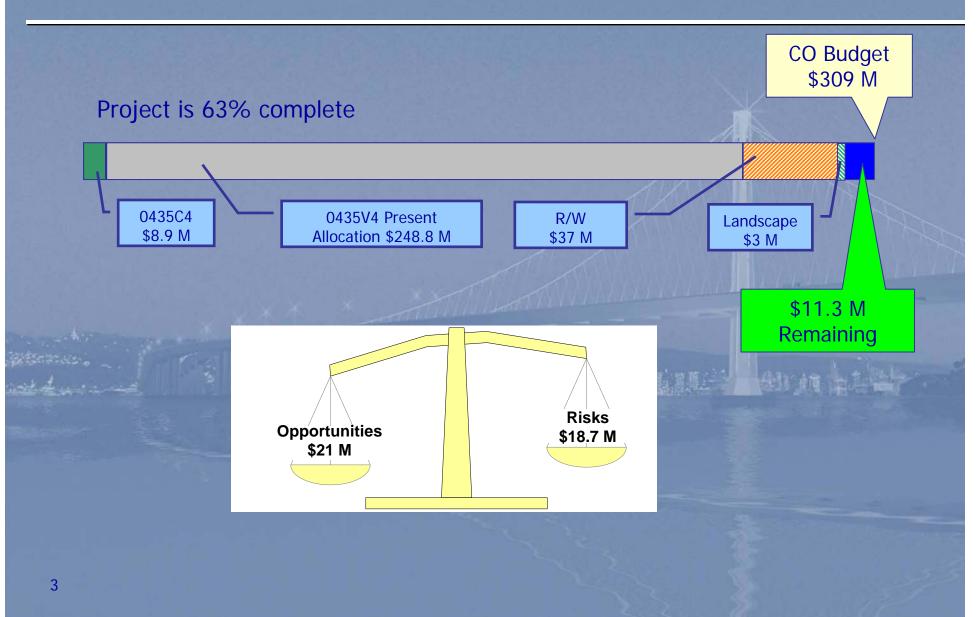
Area Construction Manager

Resident Engineer

**Public Information Officer** 



# Budget Status - Capital Outlay



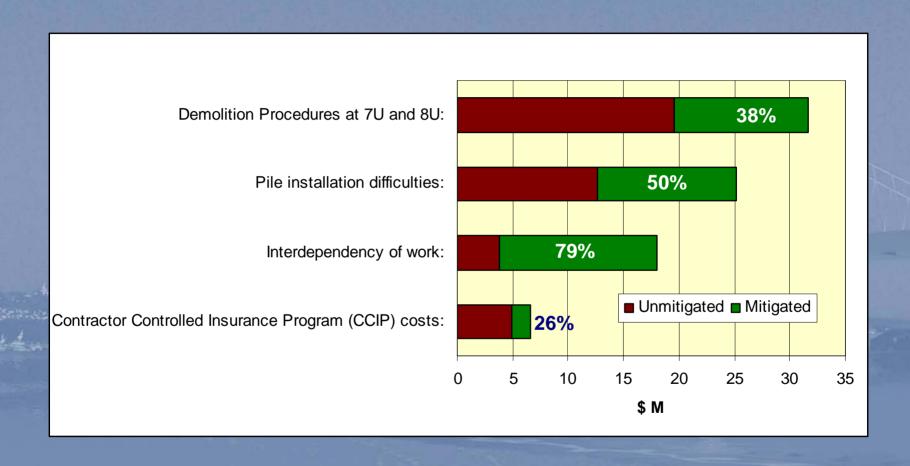
# Risk and Opportunity Management

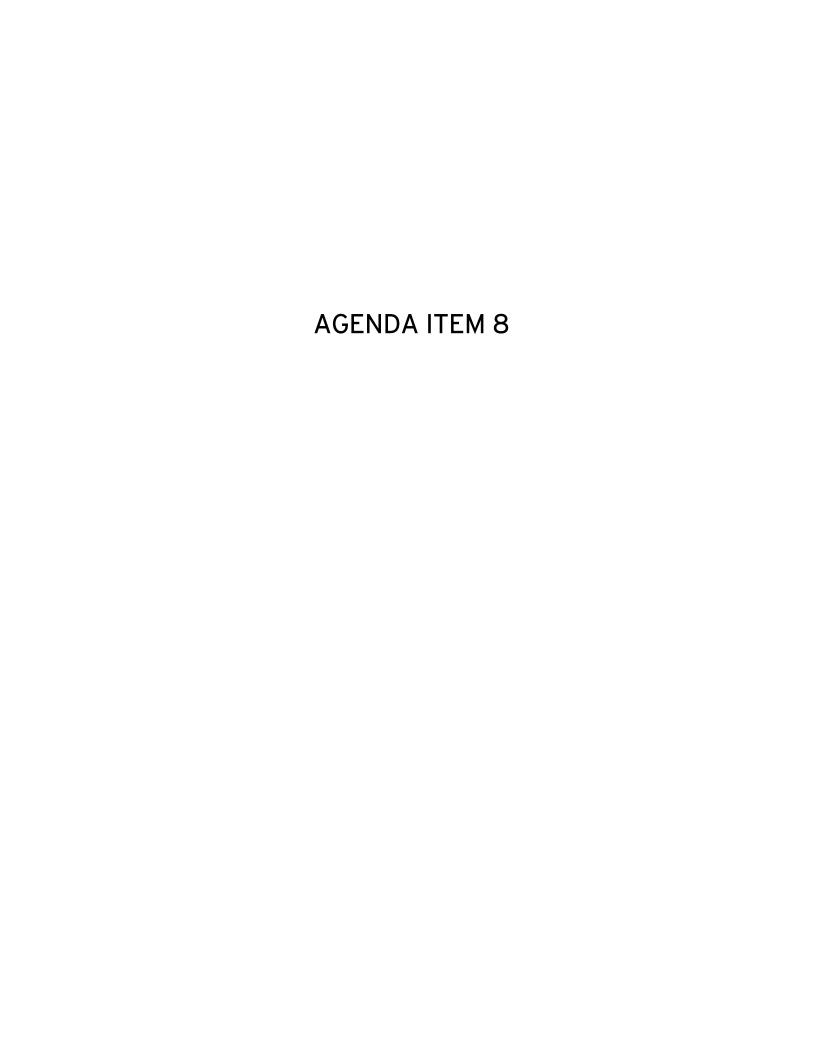
Opportunity	Estimated (\$ M)
Sale of excess right-of-way parcels (late 2009, early 2010)	18
Saving from Clocktower units not purchased (unspent R/W budget)	3
TOTAL Opportunities	21

Risk	Estimated (\$ M)
Demolition Procedures at Frames 7U and 8U	10
Pile Installation Difficulties	10
Interdependency of Work	5
Contractor Controlled Insurance Program Costs	5
Remaining in Budget	-11.3
TOTAL Risks	18.7

Note: East Loop ramps are not included.

# Reduction of Top Risks





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January 9, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: Contract 04-006064 Benicia-Martinez, North Interchange

**Dear Committee Members:** 

The Department is requesting approval to execute contract change order 71, "Electrical Work Cost Escalation".

Contract change order 71, Electrical Work Cost Escalation, provides \$2 million for the completion of the electrical work which has been delayed and impacted by the delay in construction of the adjacent main span project. This contract change order can be funded through the contract contingency.

Both CTC and BATA staff concur with the necessity of the changes proposed and agree with the time and cost of this change order.

Sincerely,

BOB FINNEY Deputy District Director Construction

Attachment cc: Mike Forner

#### CONTRACT CHANGE ORDER MEMORANDUM

TO: Forner, M / Forner, M	FILE: <b>E.A.</b> 04 - 006064
FROM LEE K	CO-RTE-PM SOL-680-L 0.3/L 1.0 SOL-780-0.7/1.5
FROM: LEE K	<b>FED. NO.</b> ACIM-680-1(054)56
CCO#: 71 SUPPLEMENT#: 0 Category Code: AXZZ	CONTINGENCY BALANCE (incl. this change) \$6,352,548.75
COST: \$1,926,000.00 INCREASE ✓ DECREASE	☐ HEADQUARTERS APPROVAL REQUIRED? ✓ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: \$0.00	IS THIS REQUEST IN ACCORDANCE WITH    ✓ YES    NO ENVIRONMENTAL DOCUMENTS?
CCO DESCRIPTION:	PROJECT DESCRIPTION:
Electrical Cost Escalation	CONSTRUCT I/C AND NORTH APPROACH

DATE: 9/21/2005

Page 1 of 1

LOCATION: IN SOLANO & CONTRA COSTA COUNTIES IN BENICIA AND MARTINEZ ON ROUTE 680 FROM MOCOCO OVERHEAD TO BAYSHORE

#### THIS CHANGE ORDER PROVIDES FOR:

compensating the Contractor for additional costs incurred for the electrical work due to the delay in the construction of the Main Span Benicia-Martinez Bridge (Bridge No. 28-0153R).

The delay in the construction of the Main Span Benicia-Martinez Bridge has significant impacts to the completion of the electrical work. Many components of the electrical work in the project require access through the Main Span Benicia-Martinez Bridge, as well as, the Right of Way area occupied by the contractor for the Main Span Benicia-Martinez Bridge. Therefore, the electrical work in this project cannot be completed until the completion of the Main Span Benicia-Martinez Bridge. The Department considered different alternatives, which include transferring the work to the Main Span contract and re-packaging the electrical work. However, the Department determined that the most reasonable and cost effective solution was to have the current contractor finish the work in its entirety.

There are 42 electrical items out of a total of 56 impacted by this delay, which represent \$5,421,900 of the contract amount. The impacts include labor and material escalation, additional handling of the material, and performing work out of sequence. In addition, the Contractor will be responsible to procure all the material necessary to finish the contract in order to avoid further escalation. For these impacts and changes, the contractor will receive a lump sum payment of \$1,926,000.00. Records and cost calculations for this change order are on file with the project records.

The Contractor will be granted 70 non-TRO working days after completion of the Main Span Benicia Bridge, which is estimated to be in December of 2007.

Mo Pazooki, Project Manager of Toll Bridge Program, concurs with this change.

No adjustment in contract time is warranted as this change does not affect contract time.

CONCURRED BY:		ESTIMATE OF COST		
Construction Engineer: Anna Reiss	Date2/13/2005	THIS REQUEST TOTAL TO DATE		
Bridge Engineer:	Date	ITEMS \$0.00 \$0.00		
FHWA Representative:	Date	FORCE ACCOUNT \$0.00 \$0.00		
		AGREED PRICE \$0.00 \$0.00		
Project Engineer: Mo Pazooki	Date	ADJUSTMENT \$1,926,000.00 \$1,926,000.00		
Other (specify):	Date	TOTAL \$1,926,000.00 \$1,926,000.00		
		FEDERAL PARTICIPATION		
	Date	PARTICIPATING PARTICIPATING IN PART NONE		
		☐ NON-PARTICIPATING (MAINTENANCE) ✓ NON-PARTICIPATING		
	Date	FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)		
	4-1	✓ CCO FUNDED PER CONTRACT CCO FUNDED AS FOLLOWS		
District Prior Approval By:	Date	FEDERAL FUNDING SOURCE PERCENT		
HQ (Issue Approve) By:	Date	- I ESTIVET ONBING GOOTIGE I ENGLIST		
Resident Engineer's Signature:	Date			

#### CONTRACT CHANGE ORDER

Change Requested by:

Engineer

CCO: 71 Suppl. No. 0 Contract No. 04 - 006064 Road SOL-680-L 0.3/L 1.0 SOL-780-0.7/1.5

To: C C MYERS INC

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.** 

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

#### **Adjustment of Compensation at Lump Sum:**

The Contractor shall be compensated a sum of \$1,926,000.00 for additional costs to perform the electrical work incurred due to the delay in the construction of the Main Span Benicia-Martinez Bridge (Bridge No. 28-0153R). This sum constitutes full and complete compensation including all markups for all impacts to the electrical work caused by the above mentioned delay. These impacts include, but are not limited to, labor, equipment and material escalation, additional handling of material, performing work out of sequence, and storage of all material necessary to complete the electrical work.

The Contractor shall be allowed additional 70 non-TRO (Time Related Overhead) working days upon completion of the Main Span Benicia-Martinez Bridge in order to complete all aspects of the electrical work as contemplated. Currently, the completion of the Main Span Benicia-Martinez Bridge is estimated to be in December of 2007.

There will be no time adjustment as this change does not affect the controlling operatons.

Estimated cost of Adjustment of Compensation at Lump Sum ......\$1,926,000.00

	Estimated Cost: Inc	crease 🗹 Decrease 🗔	\$1,926,000.00
By reason of this order the time of completion v	will be adjusted as follows: 0 days		
Submitted by			The Court of the C
Signature	Resident Engineer:	LEE K	Date
Approval Recommended by		เสอสเตอร์เสรียย์รับสินิสัตว์ตัวเลยเดียร <sub>์</sub> แก้ไ	海水 情報 计算机 电极处理器
Signature	Construction Engineer:	Forner, M	Date
Engineer Approval by		Alexandra programme se a como de la filia de la como de la filia de la como de la filia de la como de la filia	
Signature	(Print name and title) Forner, M - Chief		Date

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		tantista eti solo suoma su
Signature	(Print name and title)	Date



#### CONSTRUCTION DIVISION

## TO: District 4 CCO Desk

Date: 12/27/2005

Contract No.: 4 - 006064

Road: SOL-680-L 0.3/L 1.0 SOL-780-0.7/1.5

FED. No.: ACIM-680-1(054)56

To: SARTIPI - 04

Attention: 04 - WEBER

HQ Direction: TO ISSUE AND APPROVE

CCO No. 071 Sup. No. 0 Rev. No. 1

Per Your Submittal Dated: 12/22/2005 CCO Category Code: A - X - Z - Z

PROVIDES ADDITIONAL COMPENSATION FOR THE COMPLETION OF THE ELECTRICAL WORK WHICH HAS BEEN DELAYED AND IMPACTED BY THE DELAY IN CONSTRUCTING THE ADJACENT MAIN SPAN CONTRACT. ADDITIONAL COSTS INCLUDE LABOR AND MATERIAL ESCALATION, ADDITIONAL COSTS DUE TO OUT-OF-SEQUENCE WORK, AND STORAGE OF MATERIAL NECESSARY TO FINISH THE WORK.

#### ISSUE AND APPROVE IS CONDITIONAL ON THE FOLLOWING:

- 1. OBTAINING THE TOLL BRIDGE PROJECT OVERSIGHT COMMITTEE'S AUTHORIZATION TO APPROVE THIS CHANGE AS THEY ARE THE APPROVING AUTHORITY FOR A CHANGE OF THIS SIZE. NOTE THAT THE ACTION RECOMMENDED HEREIN IS SUBJECT TO SUBMITTAL (BY THE DISTRICT), REVIEW AND APPROVAL OF THE TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE.
- 2. WITHIN THE MEMO, STATE THE LUMP SUM AMOUNT WITHIN THE PARAGRAPH DESCRIBING THE ELEMENTS OF COST.
- 3. OBTAINING THE CONTRACTOR'S SIGNATURE ON THE AGREED PRICE/LUMP SUM CCO. NOTE THAT FAILURE TO OBTAIN THE CONTRACTOR'S SIGNATURE WILL REQUIRE A REVISED CCO AND NEW I&A REQUEST.

THE TOTAL COST OF THIS CHANGE IS SHOWN AS \$1,926,000.00 WITH NO TIME ADJUSTMENT.

Items: \$0.00

Force Account: \$0.00
Agreed Price: \$0.00
Adj. of Comp. \$1,926,000.00

Total: \$1,926,000.00

Time: (NONE)

Form Revised: 1/7/05 7:20:42 AM 9396

Date: 12/27/2005 Page 2 of 2

**Contract No.:** 4 - 006064

**Road:** SOL-680-L 0.3/L 1.0 S

**FED. NO.:** ACIM-680-1(054)56

CCO No. 071 Sup. No. 0 Rev. No. 1 CCO Category Code: A - X - Z - Z

Continued:

**EUGENE MALLETTE,** by: Assistant Division Chief

**Ken Darby** 

Division of Construction 1120 "N" Street, MS-44, Sacramento, CA 95814 Fax Number: (916) 654-5735

To Confirm Transmission, Call (916) 654-5259

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January 9, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: Contract 04-006064 Benicia-Martinez, North Interchange

**Dear Committee Members:** 

The Department is requesting approval to execute contract change order 99, "Span 17 Construction".

Contract change order 99, Span 17 Construction, provides an additional \$4 million to complete the structure work due to delay in construction of the adjacent main span project. This contract change order can be funded through the contract contingency.

Both CTC and BATA staff concur with the necessity of the changes proposed and agree with the time and cost of this change order.

Sincerely,

BOB FINNEY
Deputy District Director
Construction

Attachment cc: Mike Forner

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

#### **CONTRACT CHANGE ORDER MEMORANDUM**

TO: Forner, M	/ Forner, M			FILE: E.A.	04 - 006064	
		CO-RTE-PM	SOL-680-L 0.3/L 1.0 SOL-780-0.7/1.5			
FROM: LEE K				FED. NO.	ACIM-680-1(054)56	
CCO#: <b>99</b>	SUPPLEMENT#:	0	Category Code: AGZZ	CONTINGENCY	BALANCE (incl. this change)	\$6,518,760.69
COST: \$3,9	97,029.41	NCRE	EASE 🗹 DECREASE 🗌	HEADQUARTER	S APPROVAL REQUIRED?	✓ YES □ NO
SUPPLEMENTAL	FUNDS PROVIDED:		\$0.00		ST IN ACCORDANCE WITH AL DOCUMENTS?	YES NO
CCO DESCRIPTION:			PROJECT DESC	RIPTION:		
Span 17 Construc	etion			CONSTRUCT I/C	AND NORTH APPROACH	

DATE: 2/14/2005

Page 1 of 2

#### THIS CHANGE ORDER PROVIDES FOR:

At both Br. No. 23-0212G and Br. No. 23-0215R, in Span 17, adding access openings, diaphragms and tiedowns in order to support the suspended portions of Span 17 as shown on Sheets 3 through 27 (543R2, 545R2, 546R2, 554R1, 566R2, 568R2, 569R3, 570R3, 571R2, 573R1, 583R2, 624R2, 626R1, 628R2, 631R2, 640R1, 641S1, 660R3, 662R1, 666R2, 667R4, 668R2, 671R2, 667R4, 693R1, 693SR1 of 838) of the Contract Change Order.

LOCATION: IN SOLANO & CONTRA COSTA COUNTIES IN BENICIA AND MARTINEZ ON ROUTE 680 FROM MOCOCO OVERHEAD TO BAYSHORE

This work will be done by increasing contract items #135, "Sand Lightweight Concrete" and #149, "Bar Reinforcing Steel (Bridge)" at contract item prices for a net increase of \$85,691.29. Some of this work is not covered by any contract items. Therefore, payment for the Extra Work will be a Lump Sum of \$111,689.10. In addition, payment for corrosion protection work will be at Extra Work at Force Account for an estimated cost of \$30,000.00.

The delay in the construction of the Main Span Benicia-Martinez Bridge has significant impacts to the completion of the adjoining structures, Span 17 of NB 680/WB 780 Connector and Overhead (Bridge No. 23-0212G) and Benicia-Martinez Approach Structure (Bridge No. 23-0215R). The Department considered different alternatives, which include re-packaging of this work and transferring to the Main Span Project. However, the Department determined that the most reasonable and economical alternative is to have the current contractor to finish the project in its entirety. A tentative schedule generated by the Contractor indicates that this work will be mostly completed by August 31, 2006, which is 279 working days from the current contract completion date of July 20, 2005. The Contractor will then have to wait until the contractor from the Main Span Benicia-Martinez Bridge Project completes the adjoining structure in order to remove the falsework and finish the barrier rail in Span 17. It is anticipated at this time that Frame 1 of the Main Span Benicia-Martinez Bridge Project will be completed by early April of 2007, at which time the Contractor shall come back and complete the work in 60 days. The first 279 days will be paid under the Contract Item No 2, "Time Related Overhead" at a rate of \$7,000.00/day. When the Contractor returns to complete the 60 days of work, TRO will be applied at a reduced rate of \$2,000.00/day.

In addition this 279 working day time extension provides resolution for time impacts for Contract Change Order Nos. 6, 7, 29, 32, 68, 70, 75, 80, 89, 90, 93, 96, 98, and 110.

Also included in the cost is an adjustment of compensation for the additional work required to gain access to Span 17 (Access Trestle), in the amount of \$1,696,649.02. The bridge loads were revised by the Department after the Contractor had submitted the trestle access and falsework submittal. Therefore, the trestle has been modified to accommodate revised bridge load conditions. The Contractor shall be compensated for the costs of handling, installing and removing additional trestle materials and providing 24" diameter piles. In addition, compensation is provided for 6 months of falsework and access trestle material rental costs for Br. No. 23-0212G and Br. No. 23-0215R Span 17. This compensation constitutes compensation for all impacts due to the scope of this contract change order.

A Force Account Analysis was performed to arrive at all of the above costs, and it is on file with the project documents. These costs can be financed from the contingency fund.

This Contract Change Order combines work from CCO 74 with CCO 99. Originally CCO 74 provided the means to complete contract work considering at least one year delay anticipated for the completion of the 04-006034 project. CCO 74 provided tie-downs to be in place in span 17 of both Bridge Number 23-0212G and 23-0215R. In addition, the remaining portion of span 17 was eliminated and was to be constructed by others in the future. To date, the project schedules for 04-006034 and 04-006064 contracts are such that the completion of span 17 by the 04-006064 contract is the most economical alternative. CCO 99 provides for the required coordination of the contractors work to meet the schedule of the 04-006034 contract revised and added to CCO 99. Furthermore, execution of CCO 74 will not be pursued.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

### **CONTRACT CHANGE ORDER MEMORANDUM**

EA: 006064 CCO: 99 - 0

DATE: 2/14/2005

Page 2 of 2

Concurrence from Maintenance Services is not required for this work, as it will not affect any maintenance facilities after completion of the contract.

The Project Engineer, and Construction engineer agree with this change.

CONCURRED BY:		ESTIMATE OF COST
Construction Engineer: Anna Reiss	Date	THIS REQUEST TOTAL TO DATE
Bridge Engineer: Peter Strykers	Date	TEMS \$2,038,691.29 \$2,038,691.29 FORCE ACCOUNT \$30,000.00 \$30,000.00
FHWA Representative:	Date	FORCE ACCOUNT \$30,000.00 \$30,000.00 AGREED PRICE \$111,689.10 \$111,689.10
Project Engineer:	Date	ADJUSTMENT \$1,816,649.02 \$1,816,649.02
Other (specify): David Ambuehl, Construction Manager	Date	TOTAL \$3,997,029.41 \$3,997,029.41  FEDERAL PARTICIPATION
Mo Pazooki, Project Manager	Date6/30/2005	✓ PARTICIPATING
	Date	FEDERAL SEGREGATION (ii more than one Funding Source or P.I.P. type)  ✔ CCO FUNDED PER CONTRACT
District Prior Approval By: Mike Forner	Date7/13/2005	FEDERAL FUNDING SOURCE PERCENT
HQ (Issue Approve) By:	Date	- LESTINE FORDING GOOTIGE TENGENT
Resident Engineer's Signature:	Date	

CONTRACT CHANGE ORDER

RDER Change Requested by:

CCO: 99 Suppl. No. 0 Contract No. 04 - 006064 Road SOL-680-L 0.3/L 1.0 SOL-780-0.7/1.5 FED. AID LOC.: ACIM-680-1(054)56

To: C C MYERS INC

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. NOTE: This change order is not effective until approved by the Engineer.

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

#### **Estimate of Increase in Contract Item at Contract Price:**

Item No. 2: TIME-RELATED OVERHEAD

279 WDAY ( +41.03%) @ \$7.000.00 /WDAY = +\$1,953,000.00 ( +60.88%)

Item No. 135: SAND LIGHTWEIGHT CONCRETE

140.82M3 ( +1.68%) @ \$500.00 /M3 = +\$70,410.00 ( +1.68%)

Item No. 149: BAR REINFORCING STEEL (BRIDGE)

13892.078 KG ( +0.25%) @ \$1.10 /KG = +\$15,281.29 ( +0.60%)

A determination of the delay in completion of the contract due to the work specified by Contract Change Order #99 S0 has been made in accordance with the provisions of Section 8-1.07, "Liquidated Damages," of the Standard Specifications. This change order affected the completion of Phase I of the project for 279 working days for the time period of 7/20/05 through 8/31/06. The Contractor agrees and accepts the 279 working day time extension due to the work specified in this change order. In addition the Contractor agrees and accepts this 279 working day time extension as resolution for time impacts for Contract Change Order Nos. 6, 7, 29, 32, 68, 70, 75, 80, 89, 90, 93, 96, 98, and 110.

If prosecution and progress of work specified in this change order is hindered by any factors as outlined in Section 8, "Prosecution and Progress," of the Standard Specifications, the Department will allow a time extension and consider additional compensation to the Contractor as deemed appropriate.

The quantity shown herein for Item No. 135, Sand Lightweight Concrete, and item No. 149, Bar Reinforcing Steel (Bridge), when combined with the quantities specified in the Engineer's Estimate, and as modified by any previous change orders, shall be the final quantity for which payment will be made.

Estimated total cost for Increase in Contract Item.....\$2,038,691.29

#### **Extra Work at Force Account:**

As directed by the Engineer, provide corrosion protection for the rebar.

Estimated cost of Extra Work at Force Account ......\$30,000.00

#### **Adjustment of Compensation at Unit Price:**

After the completion of the upper hinge of Frame 1 of the Main Span Benicia-Martinez Bridge Project in April of 2007, the Contractor shall return and complete the remaining work in 60 days. The 60 days of TRO will be paid at a reduced unit rate of \$2,000.00/day. This unit price constitutes full compensation for the TRO costs, that are incurred after the Contractor returns to complete the work

Estimated cost of Adjustment of Compensation at Agreed Unit Price ............60 days @ \$2,000.00/day = \$120,000.00

#### **Extra Work at Lump Sum:**

At both Br. No. 23-0212G and Br. No. 23-0215R, in Span 17, add access openings, diaphragms and tiedowns in order to support the suspended portions of Span 17 as shown on Sheets 3 through 27 (Contract Plan replacement sheets: 543R2, 545R2, 546R2, 554R1, 566R2, 568R2, 569R3, 570R3, 571R2, 573R1, 583R2, 624R2, 626R1, 628R2, 631R2, 640R1, 641S1, 660R3, 662R1, 666R2, 667R4, 668R2, 671R2, 667R4, 693R1, 693SR1 of 838) of this Contract Change Order.

All work shall be performed in accordance with the Contract Special Provisions and the Standard Specifications

For this work, the Contractor shall be paid an agreed lump sum of \$111,689.10. This sum constitutes full and complete compensation for providing all labor, material, equipment, tools and incidentals, including markups and cost escalations by reason of this change order. The escalation cost related to Item #149, Bar Reinforcing Steel for Br. No. 23-0215R superstructure will be addressed in a supplemental change order.

CONTRACT CHANGE ORDER

Suppl. No. ()

CCO: 99

Contract No. 04 - 006064 Road SOL-680-L 0.3/L 1.0 SOL-780-0.7/1.5

Change Requested by:

FED. AID LOC .: ACIM-680-1(054)56

Engineer

Estimated cost of Extra Work at Lump Sum .....\$111,689.10

#### **Adjustment of Compensation at Lump Sum:**

This change order provides compensation for the construction of the revised Span 17 Access Trestle. The trestle was modified to accommodate revised bridge load conditions provided by the Engineer. The Contractor shall be compensated for the costs of handling, installing and removing additional trestle materials and furnishing 24" diameter piles. In addition, compensation is provided for 6 months of falsework and access trestle material rental costs for Br. No. 23-0212G and Br. No. 23-0215R Span 17. This compensation is for all impacts due to the scope of this contract change order.

All work shall be performed in accordance with the Contract Special Provisions and the Standard Specifications.

A lump sum payment of \$1,696,649.02 will be made for the work described above. This sum constitutes full and complete compensation for providing all labor, material, equipment, tools and incidentals, including markups by reason of this change order.

Estimated cost of Adjustment of Compensation at Lump Sum ......\$1,696,649.02

	Estimated Cost: In	crease 💌	Decrease 🗀	\$3,997,029.41
By reason of this order the time of completion will be adjusted as	follows: 279 days	<b>i</b>		
Submitted by		and the state of t	MANUAL STREET	The same of the sa
Signature	Resident Engineer:	LEE K		Date
Approval Recommended by	nesternament bereitings eine Galle			
Signature	Construction Engineer:	Forner, M		Date
Engineer Approval by	and the state of t	Water Strain Conduction	Minimus Section	THE PARTY OF THE P
Signature	( <b>Print name and title</b> ) Forner, M - Chief			Date

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		CONTRACTOR STREET
Signature	(Print name and title)	Date
		1



#### CONSTRUCTION DIVISION

## TO: District 4 CCO Desk

Date: 12/29/2005

Contract No.: 4 - 006064

Road: SOL-680, 780-39.4/41.0

FED. No.: ACIM-680-1(054)56N

To: SARTIPI - 04

Attention: 04 - WEBER

HQ Direction: TO ISSUE AND APPROVE

CCO No. 099 Sup. No. 0 Rev. No. 3

Per Your Submittal Dated: 12/22/2005 CCO Category Code: A - G - Z - Z

COMPENSATE THE CONTRACTOR FOR ADDITIONAL COSTS TO COMPLETE THE STRUCTURE WORK DUE TO THE DELAY IN CONSTRUCTION OF THE MAIN SPAN BENICIA-MARTINEZ BRIDGE. THE COST INCLUDES TRO FOR 279 WORKING DAYS AND REDUCED OVERHEAD FOR 60 DAYS. ALSO INCLUDES ADDITIONAL ACCESS OPENINGS, DIAPHRAGMS AND TIEDOWNS IN ORDER TO SUPPORT THE SUSPENDED PORTIONS OF SPAN 17. PROVIDES COMPENSATION FOR PROVIDING CORROSION PROTECTION OF THE REBAR AT FORCE ACCOUNT.

#### ISSUE AND APPROVE IS CONDITIONAL ON THE FOLLOWING:

- 1) OBTAINING THE TOLL BRIDGE PROJECT OVERSIGHT COMMITTEE'S AUTHORIZATION TO APPROVE THIS CHANGE AS THEY ARE THE APPROVING AUTHORITY FOR A CHANGE OF THIS SIZE. NOTE THAT THE ACTION RECOMMENDED HEREIN IS SUBJECT TO SUBMITTAL (BY THE DISTRICT), REVIEW AND APPROVAL OF THE TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE.
- 2) OBTAINING THE CONTRACTOR'S SIGNATURE ON THE AGREED PRICE CCO. NOTE THAT FAILURE TO OBTAIN THE CONTRACTOR'S SIGNATURE WILL REQUIRE A REVISED CCO AND NEW I&A REQUEST.

THE TOTAL COST OF THIS CHANGE IS SHOWN AS \$3,997,029.41 WITH AN INCREASE OF 279 WORKING DAYS.

Items: \$2,038,691.29

Force Account: \$30,000.00 Agreed Price: \$111,689.10 Adj. of Comp. \$1,816,649.02

Total: \$3,997,029.41

Time: 279 (WORKING DAYS INCREASE)

Form Revised: 1/7/05 11:51:50 AM 9406

Date: 12/29/2005 Page 2 of 2

**Contract No.:** 4 - 006064

**Road:** SOL-680, 780-39.4/41.

**FED. NO.:** ACIM-680-1(054)56

CCO No. 099 Sup. No. 0 Rev. No. 3 CCO Category Code: A - G - Z - Z

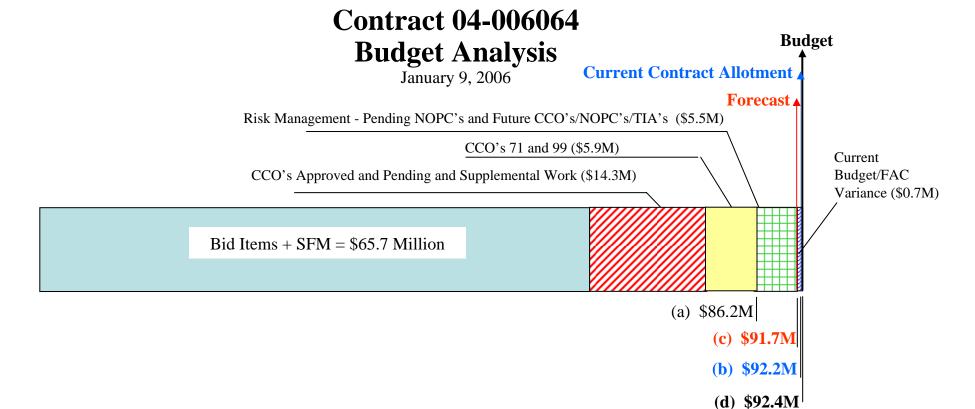
Continued:

**EUGENE MALLETTE,** by: Assistant Division Chief

**Ken Darby** 

Division of Construction 1120 "N" Street, MS-44, Sacramento, CA 95814 Fax Number: (916) 654-5735

To Confirm Transmission, Call (916) 654-5259



### **Current Contract Budget Funding Status**

January 2006 Basis

#### Contract Forecast At Completion (FAC) & Variance - 01/06/06

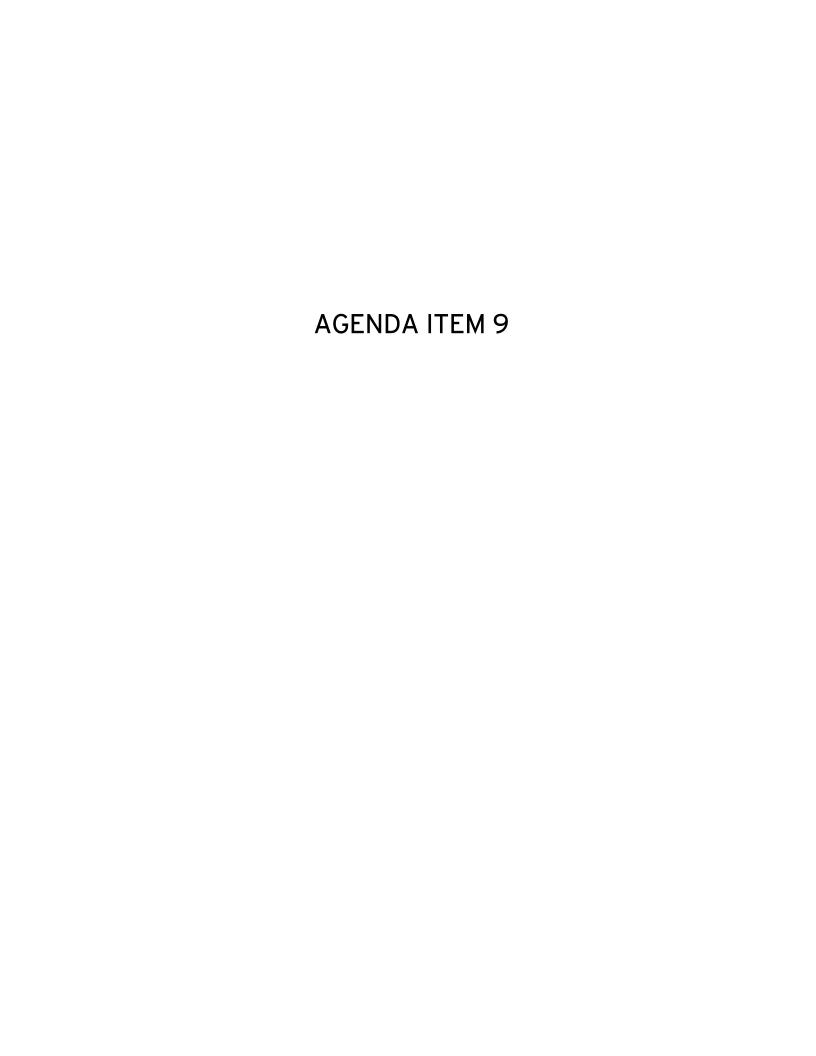
January 2006 Basis

Current Budget/FAC Variance \$

(671,629)

Contract Items	\$ 64,416,704	Contract Items	\$	64,416,704
State Furnished Materials (SFM)	\$ 1,293,275	plus quantity over runs	\$	267,734
Subtotal	\$ 65,709,979	State Furnished Materials (SFM)	\$	1,293,275
Supplemental Work	\$ 1,855,000	Subt	otal \$	65,977,713
Contingency	\$ 6,635,021	Supplemental Work Remaining	\$	1,073,000
Subtotal Original Contract Allotment	\$ 74,200,000	CCOs		
Supplemental Budget Allocation Approved	\$ 18,046,600	CCOs (Approved $(139)$ + Pending $(16)$ = Total $(155)$ )	\$	13,209,629
Subtotal Current Contract Allotment	\$ 92,246,600 (b)	CCOs #71 and 99 pending POC approval (01/19/06)	_\$_	5,923,029
Remaining Unallotted Budget	\$ 153,400	Subt	total \$	86,183,371 (a)
		Risk Management		
	 	Pending NOPC's/TIA's	\$	545,000
Total Current Contract Budget	\$ 92,400,000 (d)	Future CCO's/NOPC's/TIA's	\$	5,000,000
		Total Current Contract Forecast At Completion (as of 01/06)	/06) \$	91,728,371 (c)

## Confidential Draft – For Deliberative Purpose Only



111 GRAND AVENUE P. O. BOX 23360 OAKLAND, CA 94612 PHONE (510) 286-5896 FAX (510) 286-6194



January 19, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

**Subject: Antioch and Dumbarton Study Update** 

**Dear Committee Members:** 

The Department plans to provide an update on the Antioch and Dumbarton Study to the Committee at the January 19<sup>th</sup> TBPOC meeting. This update will include, a review of the findings of the Vulnerability Studies, the baseline cost estimate and schedule, the Risk Management Plan, the ongoing Sensitivity Analysis and the next steps in moving the proposed Study forward.

The Department has been updating the BATA staff with the project progress and the funding plan.

Attached for your information is the quarterly and monthly progress report update.

MO PAZOOKI, Benicia-Martinez Bridge Project Manager

Attachment: Quarterly and Monthly Progress Report Update

### **Other Toll Bridges**

### **Dumbarton and Antioch Bridges**

The original design of the Dumbarton and Antioch Bridges were based on design criteria developed after the 1971 San Fernando Earthquake. In the early 1990's. Caltrans determined that these two structures had the seismic resistant features required by the post 1971 codes and were not likely to be vulnerable during a major seismic event. Since that time, Caltrans has pursued an aggressive seismic research program, and based on the results of this program, significantly revised its seismic design practice in the 1990's. late Consistent with Caltrans recommendations bv the Seismic Advisory Board, Caltrans regularly reassesses the seismic hazard and performance of its bridges. Due to the tremendous changes in seismic design practice that have occurred since the design of the Dumbarton and Antioch bridges, a comprehensive assessment of the potential need and scope for seismic retrofit based on current knowledge is prudent.

Previous Reports: A number of limited studies have been made of these bridges in the past. However, none of the studies have fully assessed the seismic performance of the structures under current standards.

Vulnerability Studies: In late 2004, Caltrans initiated vulnerability studies on the Dumbarton and Antioch bridges. The purpose of these studies was to conclusively determine if the bridges would meet current seismic performance standards. The studies were essentially completed in May 2005. They were not a complete global analysis, but rather an

investigation of selected bents modeled as independent structures. The analysis was limited in scope and based on asbuilt plans and currently available geotechnical information. The superstructure response was not analyzed.

The Dumbarton and Antioch Bridges have many seismic resistant features, and the results of the vulnerability studies indicate that the bridges should perform well in a moderate seismic event. However, during a major seismic event, some potential vulnerabilities (summarized below) become apparent.

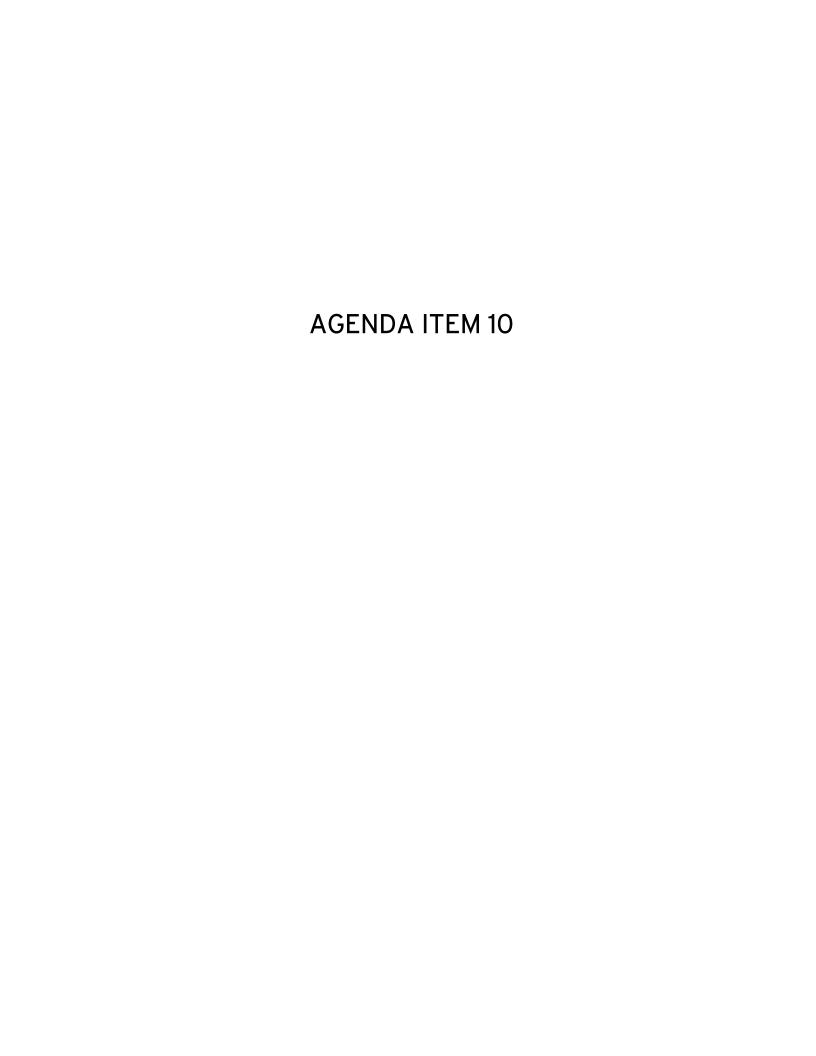
- Foundation response generally governs performance. The piles may plunge axially and potentially cause permanent footing rotations.
- Potentially large foundation displacements and rotations may result in deformations that can't be easily repaired.
- The bent cap, pile cap, pile and superstructure are not capacity protected by the ductile columns and, as a result, these elements may be damaged in a major event, especially if the foundation is retrofitted.

Given the limitations of the studies, there was insufficient evidence to conclusively determine the performance of the bridges during a maximum credible earthquake (MCE). While the Dumbarton and Antioch bridges may meet performance standards, a more comprehensive technical study necessary to understand the performance of these structures during an MCE event. A study of this level is necessary to accurately determine the structures' response and to develop any necessary retrofit strategies. A comprehensive geotechnical study using the latest analysis techniques is likely necessary in order to perform this level of analysis.

Sensitivity Analysis: As a follow-up to the Vulnerability Study, a sensitivity analysis is being performed on a single representative bent used in Vulnerability Study (Bent 23 of the Dumbarton Bridge). The goal of the analysis is to determine the structural response associated with uncertainties in the geotechnical data. An envelope of soil conditions (best-case and worst case scenarios) was used in the analysis. The results of the Sensitivity Analysis will be used to determine the scope and value of conducting further geotechnical studies.

While the Sensitivity Analysis is ongoing, preliminary results indicate that the seismic response of the bridge is largely dependant on the soil conditions and that a comprehensive geotechnical investigation is essential understanding the bridge's performance during a major seismic event. A work plan is being developed to assess the extent of geotechnical work needed for a complete seismic analysis and to assess the required performance levels for each structure.

Cost and Schedule: A preliminary cost estimate, schedule, and an initial risk been analysis have developed to complete a comprehensive seismic analysis for each bridge. The preliminary estimate and schedule were developed as baseline assuming complete a geotechnical geophysical and investigation is required at each bridge.



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Flex your power! Be energy efficient!

January 19, 2005

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

**Subject: TBPOC Meeting Policy and Procedures: 1.0 Attendance and Meeting Materials** 

Dear Committee Members:

Please find attached a draft *Meeting Policy and Procedures: 1.0 Attendance and Meeting Materials* document. The policy and procedures document identifies participants of the TBPOC meetings and describes the dissemination of meeting materials.

*Meeting Policy and Procedures: 1.0 Attendance and Meeting Materials* document has been discussed with the PMT (Caltrans, BATA and CTC) and they concur with the policy.

The Department plans to request your approval at the January TBPOC meeting.

JON TAPPING, Acting SFOBB East Span Project Manager

### TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE (TBPOC)







Policy & Procedures Memo 1.0 TBPOC Attendance and Meeting Materials January 19, 2006

Per the AB144, Chapter 71, Section 8 (30952.1), the Toll Bridge Program Oversight Committee (TBPOC) comprised of the Caltrans Director, BATA Executive Director, and California Transportation Commission Executive Director shall meet on a monthly basis to discuss and make decisions related to the Toll Bridge Program.

#### TBPOC MEETING ATTENDANCE

Monthly attendance is required for the following:

- A. Toll Bridge Program Oversight Committee Members
  - 1. Will Kempton, Caltrans Director, Chair
  - 2. Steve Heminger, BATA Executive Director
  - 3. John Barna, CTC Executive Director
- B. Program Management Team Members
  - 1. Randy Iwasaki, Caltrans
  - 2. Andrew Fremier, BATA
  - 3. Stephen Maller, CTC
- C. Toll Bridge Program Project Managers
  - 1. East Span Jon Tapping
  - 2. West Approach Ken Terpstra (as identified on the agenda)
  - 3. Benicia Mo Pazooki (as identified on the agenda)
- D. TBPOC/PMT Staff Support Team
  - 1. Leo Scott
  - 2. Judis Santos
  - 3. Clerk
- E. Presenters/Invited Guests Those individuals identified on the agenda and/or other invited guests. These individuals will be invited by the Clerk.

#### TBPOC MEETING MATERIALS

TBPOC meeting materials will be provided in hard copy and electronic format. All materials will be distributed by the Clerk one week prior to the TBPOC meeting date. Any revised materials developed between the binder mail-out date and the Committee meeting will be printed on blue paper and provided during the meeting. All materials provided in the binder will have undergone PMT review.

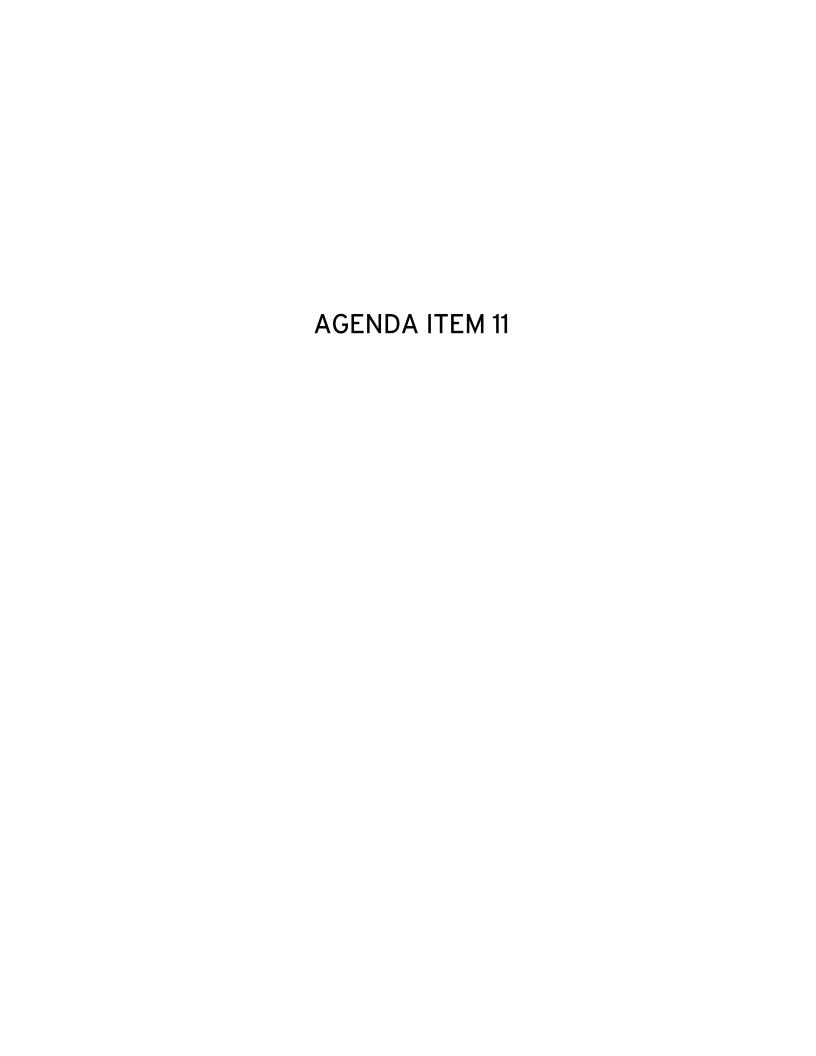
The following participants will receive meeting materials:

- A. Binders with Colored Copies
  - 1. TBPOC Members
  - 2. PMT Members
  - 3. Clerk (File)

Policy & Procedures Memo 1.0 TBPOC Attendance and Meeting Materials Page 2

- B. Black And White Packets
  - 1. Program Manager
  - 2. Program Risk Manager
  - 3. Project Managers
  - 4. TBPOC/PMT Support (BATA)
  - 5. TBPOC/PMT Support (Caltrans)
- C. Electronic Copy
  - 1. TPBOC Members
  - 2. PMT Members
  - 3. District 4 Director
  - 4. Program Manager
  - 5. Program Risk Manager
  - 6. Project Managers
  - 7. Construction Managers
  - 8. TBPOC/PMT Support (BATA)
  - 9. TBPOC/PMT Support (Caltrans)
  - 10. BATA Consultant Representative
  - 11. Public Communications Representative
  - 12. Clerk (File)

Will Kempton,	Steve Heminger,	John Barna,
Caltrans Director, Chairman	BATA Executive Director	CTC Executive Director



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January 19, 2006

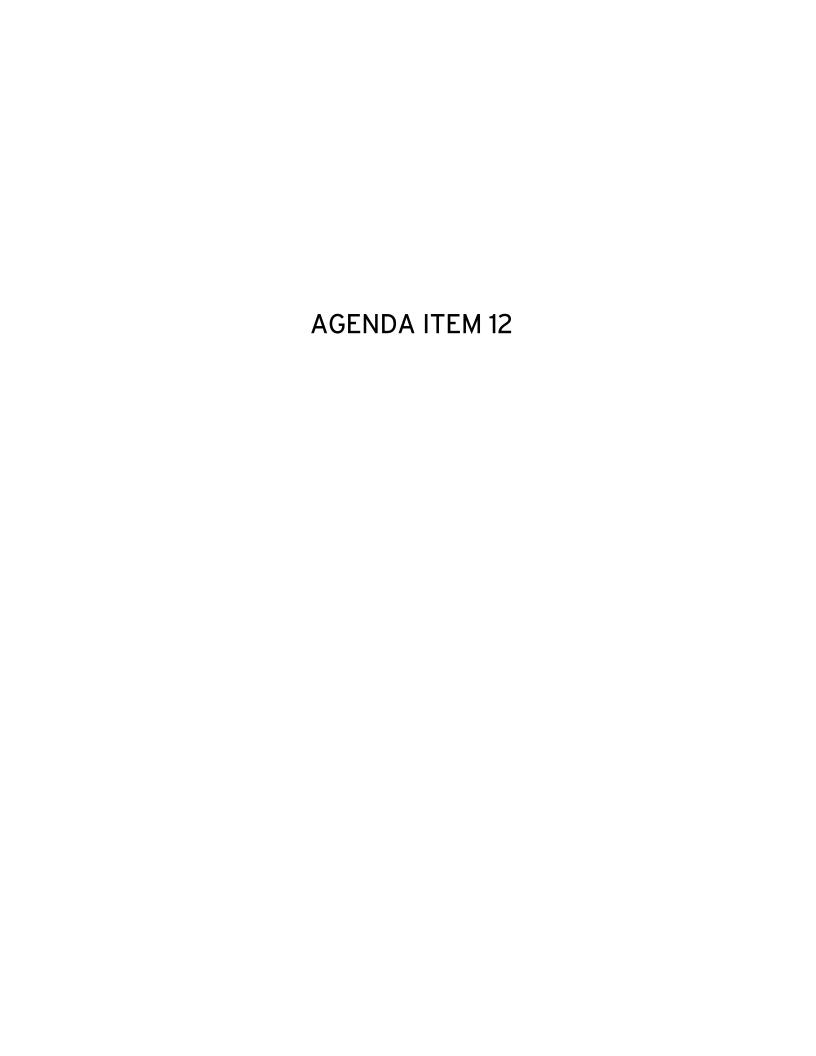
Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

Subject: Status of Caltrans Toll Program Manager and East Span Project Manager Hiring

**Dear Committee Members:** 

The Department plans to present the status of Caltrans Toll Program Manager and East Span Project Manager Hiring at the January 19th TBPOC meeting. The update is for the Committee's information only.

JON TAPPING, Acting SFOBB East Span Project Manager



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Flex your power! Be energy efficient!

January 19, 2006

Toll Bridge Program Oversight Committee (TBPOC) Will Kempton, Caltrans Director, Chairman Steve Heminger, BATA Executive Director John Barna, CTC Executive Director

**Subject: BATA/Caltrans Co-op Agreement** 

Dear Committee Members:

The Department and BATA plans to present information on the BATA/Caltrans Co-op Agreement to the Committee at the January 19th TBPOC meeting.

JON TAPPING, Acting SFOBB East Span Project Manager